

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

DORIS SUE ALLEN,

DONNA S. LUCAS,

AND ALL OTHERS SIMILARLY SITUATED,

Plaintiffs,

v.

BANK OF AMERICA CORPORATION; BANK OF AMERICA, N.A.; BARCLAYS PLC; BARCLAYS BANK PLC; BARCLAYS CAPITAL INC.; CITIBANK, N.A.; CITIGROUP, INC.; CREDIT SUISSE GROUP AG; CREDIT SUISSE SECURITIES (EUROPE) LIMITED; CREDIT SUISSE SECURITIES (USA) LLC; DEUTSCHE BANK AG; THE GOLDMAN SACHS GROUP, INC.; GOLDMAN, SACHS & CO.; HSBC HOLDINGS PLC; HSBC BANK PLC; HSBC NORTH AMERICA HOLDINGS, INC.; HSBC BANK USA, N.A.; JPMORGAN CHASE BANK, N.A.; JPMORGAN CHASE & CO; MORGAN STANLEY; MORGAN STANLEY CAPITAL SERVICES LLC ; ROYAL BANK OF SCOTLAND GROUP PLC; ROYAL BANK OF SCOTLAND PLC; RBS SECURITIES, INC.; UBS AG; UBS SECURITIES, LLC; and DOES 1-30,

Defendants.

This Document Relates to:

IN RE: FOREIGN EXCHANGE BENCHMARK RATES ANTITRUST LITIGATION

No: 1:15-cv-04285-LGS

JURY TRIAL DEMANDED

No. 1:13-cv-07789-LGS

CLASS ACTION COMPLAINT

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1. Plaintiffs Doris Sue Allen and Donna S. Lucas (“Plaintiffs”) bring this action against:

the Bank of America Corporation; Bank of America, N.A; Barclays PLC; Barclays Bank PLC; Barclays Capital Inc.; Citibank, N.A.: Citigroup, Inc.; Credit Suisse Group AG; Credit Suisse Securities (EUROPE) Limited; Credit Suisse Securities (USA) LLC; Deutsche Bank AG; The Goldman Sachs Group, Inc.; Goldman, Sachs & Co.; HSBC Holdings PLC; HSBC Bank PLC; HSBC North America Holdings, Inc.; HSBC Bank USA, N.A; JPMorgan Chase Bank, N.A.; JPMorgan Chase & Co.; Morgan Stanley; Morgan Stanley Capital Services LLC; Royal Bank of Scotland Group PLC; Royal Bank of Scotland PLC; RBS Securities, Inc.; UBS AG; UBS Securities, LLC; and DOES 1-20

on behalf of the ERISA employee benefit plans in which they are participants, including the Caterpillar Inc. Retirement Income Plan (“Caterpillar Retirement Plan”), the Caterpillar Inc. Retiree Benefit Program (“Caterpillar Benefit Plan”), and the Bridgestone Americas Salaried Employees Retirement Plan (“Bridgestone Retirement Plan”).

Plaintiffs also bring this action as a class action on behalf of a class (the “Class”) of participants, beneficiaries, and named fiduciaries of similarly-situated ERISA employee benefit plans (individually a “Plan” and collectively the “Plans”).

2. These allegations are based on (i) investigations of private law firms; the U.S. Department of Justice; the U.S. Commodities Futures Trading Commission (“CFTC”); the Board of Governors of the Federal Reserve; and the Office of Comptroller of the Currency; the New York Department of Financial Services; the U.S. Securities and Exchange Commission (“SEC”); numerous financial authorities for the United Kingdom, Switzerland, German, Hong Kong, Singapore; Australia; New Zealand, and the Group of Twenty (“G20”), the Aureus Currency Fund, L.P.; the Board of Pensions and Retirement for the City of Philadelphia; the Employees’ Retirement System of the Government of the Virgin Islands; the Employees’ Retirement System of Puerto Rico Electric Power Authority; the Fresno County Employees’ Retirement Association; the Haverhill (Massachusetts) Retirement System; the Oklahoma Firefighters Pension and Retirement System; the State-Boston Retirement System; the Syena Global Emerging Markets Fund, LP; the Tiberius OC Fund, Ltd.; the

Value Recovery Fund L.L.C.; and the United Food and Commercial Workers Union and Participating Food Industry Employers Tri-State Pension Fund; (ii) recent plea agreements and consent orders with various government entities in the United States and Europe, (ii) counsel's investigation which included reviewing: Internal Revenue Service Forms 5500 filed with the U.S. Department of Labor ("DOL"), filings with the U.S. Securities and Exchange Commission, and other publicly available documents; and (iii) and media reports. The allegations are based upon personal knowledge as to Plaintiffs and their own acts, and upon information and belief and the investigation of counsel as to all other matters.

3. On May 20, 2015 the United States Department of Justice ("DOJ") and the Board of Governors of the Federal Reserve System ("Federal Reserve") announced plea agreements had been reached and \$4.57 billion in penalties would be levied against six Defendant banking groups to settle criminal and regulatory investigations into these banks' illegal and improper collusion to manipulate the FX Spot Market benchmark rates, including the WM/Reuters Closing Spot rate and the European Central Bank ("ECB") FX rate.¹ Also on May 20, 2015, three other government entities – the New York State Department of Financial Services ("DFS"), the U.S. Commodity Futures Trading Commission ("CFTC"), and the UK Financial Conduct Authority – announced they had reached consent orders with Defendant Barclays to settle their investigations into Defendant Barclays Bank PLC and its role in manipulating the FX market. Barclays

¹ Press Release, *Five Major Banks Agree to Parent-Level Guilty Pleas* (May 20, 2015) (available at: <http://www.justice.gov/opa/pr/five-major-banks-agree-parent-level-guilty-pleas>); Press Release (May 20, 2015) (available at: <http://www.federalreserve.gov/newsevents/press/enforcement/20150520a.htm>).

agreed to additional penalties totaling \$1.32 billion with DFS and CFTC.² The facts and allegations asserted herein include factual assertions and legal conclusions contained in those May 20, 2015 plea agreements and orders, and similar earlier agreements and orders.

I. NATURE OF THE ACTION

4. This is a civil enforcement action brought pursuant to ERISA, 29 U.S.C. §1132(a)(2) and (a)(3), to recover losses and obtain equitable relief to remedy Defendants' fiduciary breaches including their transactions prohibited by ERISA. It is brought on behalf of the named Plaintiffs' ERISA plans and as a class action for relief for participants, beneficiaries, and named fiduciaries of all other similarly situated Plans.

5. Defendants' ERISA fiduciary duties, the "highest known to the law,"³ required them to act prudently and solely in the interest of the Plans' participants and beneficiaries and to not engage in transactions which are prohibited *per se* by ERISA.

6. Rather than fulfilling these duties, Defendants enriched themselves at the expense of the financial security of Plaintiffs and the Class.

7. The foreign currency or foreign exchange ("FX") market is the world's largest and most actively traded financial market. In April 2013, trading in the global FX market averaged \$5.3 trillion per day,⁴ and, in the domestic market, FX trading averaged

² This includes the £284,432,000 United Kingdom penalty converted to U.S. dollars.

³ *Donovan v. Bierwirth*, 680 F.2d 263, 272 n.8 (2d Cir. 1982).

⁴ Bank for International Settlements, Triennial Central Bank Survey, Global foreign exchange market turnover in 2013 (February 2014) (available at <https://www.bis.org/publ/rpfxf13fxt.pdf>), at Table 1 [hereinafter BIS Triennial Bank Survey 2013].

\$1.263 trillion per day.⁵ Defendants are the dominant dealers in the FX market, having a combined global market share of 84%.⁶ Plaintiffs and members of the Class are Defendants' customers.

8. The FX market revolves around spot transactions (“FX Spot Market”). Defendants dominate spot trading, acting as one of the counterparties in approximately 98% of spot volume in the United States.⁷ A spot transaction involves the exchange of currencies between two counterparties on a value date that is within two bank business days’ time. Not only do spot transactions account for approximately half of daily FX turnover in the United States, roughly \$620 billion,⁸ but they affect other instruments Defendants sell to their customers, such as outright forwards and FX swaps. Collectively, FX spot transactions, outright forwards, and FX swaps are referred to herein as “FX Transactions”.

9. Customers can order spot transactions for immediate execution, in which case Defendants quote them the current market price. Customers can also order spot transactions to be settled at a fixing rate, which is the exchange rate for a currency pair calculated at a single point in time. Defendants guarantee that the transactions will be settled at the fixing rate, regardless of current market price.

⁵ Federal Reserve Bank of New York, The Foreign Exchange and Interest Rate Derivatives Markets: Turnover in the United States (April 2013) (available at <http://nyfed.org/1dnMTlx>), at 3 [hereinafter Fed Triennial Bank Survey 2013].

⁶ Euromoney FX Survey 2013: Overall Results.

⁷ Fed Triennial Bank Survey 2013, at 6.

⁸ *Id.* at 3.

10. Two such “fixes” used to determine a fix rate in the FX Spot Market are the European Central Bank Rate, which occurs each trading day at 2:15 PM (CET) and the World Markets/Reuters Closing Spot Rate (“WM/Reuters Closing Spot Rate”), which occurs each trading day at 4:00 PM (GMT). For “Trade Currencies,” which include the currencies that are most commonly traded against the U.S. dollar and the euro, the WM/Reuters Closing Spot Rates are calculated by taking the median of a sample of bids, asks, and actual spot transactions executed in the 30 seconds before and the 30 seconds after the fix time.

11. The WM/Reuters Closing Spot Rates are calculated at 4:00 p.m. London time (11:00 a.m. New York time). Because the London market closes at this time, the WM/Reuters Closing Spot Rates are known as the “London fix,” the “fix,” or the “London close.”

12. Defendants manipulated the FX fixing rates in the FX Spot Market, including the rates set at the European Central Bank Rate and the WM/Reuters Closing Spot Rates (“FX Rate Collusion Scheme”). By communicating directly with one another, including in closed network chat rooms with incriminating names such as “The Cartel,” “The Bandits’ Club,” and “The Mafia,” Defendants exchanged confidential customer order information and trading positions. Defendants agreed on concerted strategies for trading in and around the setting of the FX Spot Market rates. As described in more detail in the paragraphs below, these collusive trading tactics included “front running/trading ahead,” “banging the close,” and “painting the screen.” Chat room transcripts reveal the details of Defendants’ collusion. Through these tactics, Defendants caused injury and damage to Plaintiffs and the Class.

13. This case also involves non-collusive activities by individual Defendants in the FX market, by which each Defendants individually executed FX transactions for ERISA Plan clients in schemes that reaped these Defendant improper profits at the expense of the Plans (“In-House FX Manipulation Schemes”).⁹ Such schemes were not disclosed by these Defendants to their ERISA clients. Such activities did not require the participation of other banking entities in the FX Spot Market, as was necessary in the FX Rate Collusion Scheme.

14. Defendants’ conspiracy to manipulate the FX Spot Market rates (the FX Rate Collusion Scheme) and their individual in-house manipulation of FX orders (the In-House FX Manipulation Schemes) had an impact on the pricing of hundreds of millions of dollars’ worth of FX Transactions and resulted in severe financial harm to Plaintiffs and members of the Class. These two schemes (collectively the “FX Schemes”) increased Defendants’ profits at the expense of their ERISA clients. Defendants concealed these schemes, including from their ERISA clients.

15. Law enforcement and regulatory authorities around the world, in the United States, Europe, Asia, Australia, and New Zealand have investigated, and in many cases continue to investigate the misconduct of Defendants in the FX market. A number of Defendants are seeking immunity, or otherwise are cooperating with authorities in these investigations. Many produced vast numbers of documents, including chat room transcripts and other conspiratorial communications. As a direct result of these global investigations, Defendants have terminated and suspended numerous personnel with

⁹ Described *infra* at “The May 20, 2015 Announcement of Agreements and Consent Orders.”

supervisory authority over their FX operations.¹⁰ Several Defendants reached plea agreements and entered consent orders with regulators as to these investigations (see “The May 20, 2015 Announcement of Agreements and Consent Orders,” below).

II. JURISDICTION AND VENUE

16. ERISA provides for exclusive federal jurisdiction over ERISA breach of fiduciary duty claims. 29 U.S.C. §1132(e)(1). The Plans are “employee benefit plans” within the meaning of ERISA, 29 U.S.C. §1002(3), and Plaintiffs are Plan participants and Plan beneficiaries within the meaning of ERISA, 29 U.S.C. §1002(7). Plan participants and beneficiaries are authorized to bring actions such as this to obtain appropriate relief for their Plans. 29 U.S.C. §1132(a)(2) and (3).

17. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §1331 (federal question) and ERISA, 29 U.S.C. §1132(e)(1).

18. Venue is proper in this district pursuant to 28 U.S.C. §1391(b) and ERISA, 29 U.S.C. §1132(e)(2), because some or all of the fiduciary breaches for which relief is sought occurred in this district and the Defendants reside and may be found in this district.

¹⁰ Except as alleged in this Complaint, neither Plaintiffs nor other members of the public have access to the underlying facts relating to Defendants’ improper activities. Rather, that information lies exclusively within the possession, custody, or control of Defendants and other insiders, which prevents Plaintiffs from further detailing Defendants’ misconduct. Moreover, the pending government investigations throughout the world into manipulation of the FX market are likely to result in disclosure of additional information from Defendants’ internal records or personnel that bears significantly on Plaintiffs’ claims. Without such records, and without access to Defendants’ internal FX trading data, Plaintiffs are unable to identify with greater specificity the Defendants’ coordinated manipulation of the FX Spot Market rates and of their In-House FX Manipulation Schemes.

III. PARTIES

Plaintiffs

19. Plaintiff Doris Sue Allen is a beneficiary of the Caterpillar Inc. Retirement Income Plan (“Caterpillar Retirement Plan”), an ERISA-covered employee benefit plan. Her husband was employed by a Caterpillar corporation. Caterpillar is the world’s leading manufacturer of construction and mining equipment, diesel and natural gas engines, industrial gas turbines, and diesel-electric locomotives. Ms. Allen also is a beneficiary of the Caterpillar Inc. Retiree Benefit Program¹¹ (“Caterpillar Health Plan”), an ERISA-covered employee benefit plan. During the Class Period, Ms. Allen received benefits from the Caterpillar Retirement Plan and Caterpillar Health Plan. Plaintiff Allen relied on the benefits for her retirement security. During the Class Period the assets of the Caterpillar Retirement Plan were invested through the Caterpillar Inc. Retirement Master Trust (“Caterpillar Retirement Master Trust”).¹² During the Class Period the assets of the Caterpillar Health Plan were invested through the Caterpillar Inc. Group Insurance Master Trust (“Caterpillar Insurance Master Trust”). Ms. Allen resides in Ladd, Illinois.

20. Plaintiff Donna S. Lucas is a beneficiary of the Bridgestone Americas Salaried Employees Retirement Plan (“Bridgestone Retirement Plan”). Bridgestone develops, manufactures, and markets tires. During the Class Period, Plaintiff Lucas received and receives a regular pension payment from the Bridgestone Retirement Plan.

¹¹ Before 2011 the Caterpillar Inc. Retiree Benefit Program was known as the [Caterpillar] Group Insurance Program.

¹² Before November 2005 the Caterpillar Retirement Master Trust was named the Caterpillar Inc. Master Pension Trust.

During the Class Period, the assets of the Bridgestone Retirement Plan were invested through the Bridgestone Americas, Inc. Master Pension Trust (“Bridgestone Master Pension Trust”).¹³ Plaintiff Lucas resides in Wilson, North Carolina.

Defendants

21. Bank of America: Defendant Bank of America Corporation is a Delaware corporation headquartered at 100 North Tryon Street, Charlotte, North Carolina 28255. Bank of America Corporation is a multinational banking and financial services corporation with its investment banking division located at the Bank of America Tower, One Bryant Park, 1111 Avenue of the Americas, New York, New York 10036. Defendant Bank of America, N.A. is a federally-charted national banking association headquartered at 101 South Tyron Street, Charlotte, North Carolina 28255, and is an indirect, wholly owned subsidiary of Bank of America Corporation. Defendants Bank of America Corporation and Bank of America, N.A. are referred to collectively in this Complaint as “Bank of America”.

22. Barclays: Defendant Barclays PLC and its subsidiary Barclays Bank PLC are British public limited companies headquartered at 1 Churchill Place, London E14 5H, England. Barclays PLC and Barclays Bank PLC and their U.S. subsidiaries are subject to regulation under numerous statutes, rules and regulations, including the International Banking Act of 1978, the Bank Holding Company Act of 1956 (BHC Act), as well as ERISA. Barclays Bank PLC is licensed by the New York Department of Financial Services with a registered address at 745 Seventh Avenue, New York, New York 10019

¹³ Before November 2011 the Bridgestone Americas, Inc. Master Pension Trust was named the Bridgestone/Firestone, Inc. Master Retirement Trust, and before November 2008 the Bridgestone Americas Holding, Inc. Master Trust.

and a foreign representative office at One MetLife Plaza, 27-01 Queens Plaza North, Long Island City, New York 11101. Defendant Barclays Capital Inc. is a wholly owned subsidiary of Barclays Bank PLC and engages in investment banking, wealth management and investment management services. It has been registered with the CFTC as a Futures Commission Merchant since 1990, an approved Exempt Foreign agent since 1992, and a Commodity Pool Operator and Commodity Trading Advisor since 2009. Barclays Bank PLC controlled, directly or indirectly, Barclays Global Investors Services during the Class Period. Defendants Barclays PLC, Barclays Bank PLC, and Barclays Capital Inc., and Barclays Global Investors Services are referred to collectively in this Complaint as “Barclays”.

23. Citigroup: Defendant Citigroup, Inc. is a Delaware corporation headquartered at 399 Park Ave, New York, New York 10022. Defendant Citibank, N.A. is federally-chartered national banking association headquartered at 399 Park Avenue, New York, New York 10022. It is a wholly owned subsidiary of Defendant Citigroup, Inc. Defendants Citigroup, Inc. and Citibank, N.A. are referred to collectively in this Complaint as “Citigroup”.

24. Credit Suisse: Defendant Credit Suisse Group AG is a Swiss company headquartered in Zurich, Switzerland. Credit Suisse Group AG is licensed by the New York Department of Financial Services with a registered address at 11 Madison Avenue, New York, NY 10010-3698. Defendant Credit Suisse Securities (Europe) Limited, formerly known as Credit Suisse First Boston (Europe) Limited, is an indirect wholly owned subsidiary of Credit Suisse Group AG. It is regulated in the United Kingdom by the Financial Services Authority. Its activities include acting as dealer in securities,

derivatives and foreign exchange on a principal and agency basis. Defendant Credit Suisse Securities (USA) LLC is a Delaware limited liability company headquartered at 11 Madison Avenue, New York, New York 10010, and is a wholly owned subsidiary of Credit Suisse Group AG. Defendants Credit Suisse Group AG, Credit Suisse Securities (Europe) Limited, and Credit Suisse Securities (USA) LLC are referred to collectively in this Complaint as “Credit Suisse”.

25. Deutsche Bank: Defendant Deutsche Bank AG (“Deutsche Bank”) is a German financial services company headquartered in Frankfurt, Germany. Defendant Deutsche Bank is licensed by the New York Department of Financial Services with a registered address at 60 Wall Street, New York, New York 10005-2858.

26. Goldman Sachs: Defendant The Goldman Sachs Group, Inc. is a Delaware corporation headquartered at 200 West Street, New York, New York 10282. The Goldman Sachs Group Inc. is a bank holding company and a financial holding company. Defendant Goldman, Sachs & Co. is a wholly owned subsidiary of the U.S. financial services corporation The Goldman Sachs Group, Inc. and is its principal operating subsidiary in the United States. Goldman, Sachs & Co. is located at 200 West Street, New York, New York 10282. Defendants The Goldman Sachs Group, Inc. and Goldman, Sachs & Co. are referred to collectively in this Complaint as “Goldman Sachs”.

27. HSBC: Defendant HSBC Holdings PLC is a United Kingdom public limited company headquartered in London, England. Defendant HSBC Bank PLC is a United Kingdom public limited company headquartered in London, England and is a wholly owned subsidiary of HSBC Holdings PLC. Defendant HSBC North America

Holdings Inc. is a Delaware corporation headquartered in New York, and is a wholly owned subsidiary of HSBC Holdings PLC. Defendant HSBC North America Holdings, Inc. is the holding company for HSBC Holding PLC's operations in the United States. Defendant HSBC Bank USA, N.A., is a national banking association with its principal place of business in New York, New York, and is an indirect wholly owned subsidiary of HSBC North America Holdings Inc. Defendants HSBC Holdings PLC, HSBC Bank PLC, HSBC North America Holdings Inc., and HSBC Bank USA, N.A. are referred to collectively in this Complaint as "HSBC".

28. JPMorgan: Defendant JPMorgan Chase & Co. is a Delaware corporation headquartered at 270 Park Ave., 38th Floor, New York, New York 10017. Defendant JPMorgan Chase Bank, N.A., is a federally-chartered national banking association headquartered at 270 Park Avenue, 38th Floor, New York, New York 10017, and is a wholly owned subsidiary of Defendant JP Morgan Chase & Co. Defendants JPMorgan Chase & Co. and JPMorgan Chase Bank, N.A. are referred to collectively in this Complaint as "JPMorgan".

29. Morgan Stanley: Defendant Morgan Stanley is a global financial services firm that, through its subsidiaries and affiliates, provides products and services, including foreign exchange, to clients and customers, including corporations, governments, financial institutions, and employee benefits funds. Morgan Stanley is a State of Delaware company, and a financial holding company regulated by the Board of Governors of the Federal Reserve System (the "Federal Reserve") under the Bank Holding Company Act of 1956, as amended. Morgan Stanley is headquartered at 1585 Broadway, New York, New York 10036 and has principal offices in London, Tokyo,

Hong Kong and other world financial centers. Defendant Morgan Stanley Capital Services, LLC is a Delaware company and an indirect wholly owned subsidiary of Morgan Stanley. Defendants Morgan Stanley and Morgan Stanley Capital Services LLC are referred to collectively in this Complaint as "Morgan Stanley".

30. RBS: Defendant Royal Bank of Scotland Group PLC is a United Kingdom public limited company headquartered in Edinburgh, Scotland. Defendant Royal Bank of Scotland Group PLC is licensed by the New York Department of Financial Services with a registered address at 340 Madison Avenue, New York, New York 10173. Defendant Royal Bank of Scotland PLC is a wholly-owned direct subsidiary of RBS Group PLC. Defendant RBS Securities, Inc., a Delaware corporation headquartered at 600 Washington Boulevard, Stamford, Connecticut 06901, is an indirect wholly-owned subsidiary of Defendant Royal Bank of Scotland PLC. Defendants Royal Bank of Scotland Group PLC, Royal Bank of Scotland PLC, and RBS Securities, Inc., are referred to collectively in this Complaint as "RBS".

31. UBS: Defendant UBS AG is a Swiss company based in Basel and Zurich, Switzerland. Defendant UBS Securities LLC is a Delaware limited liability company headquartered at 677 Washington Blvd, Stamford, Connecticut 06901, and is a wholly owned subsidiary of UBS AG. Defendants UBS AG and UBS Securities LLC are referred to collectively in this Complaint as "UBS".

32. "Defendant" or "Defendants" as used herein, includes, in addition to those named specifically above, all of the named Defendants' predecessors, including those entities that merged with, or were acquired by the named Defendants and each named

Defendant's wholly owned or controlled subsidiaries or affiliates that played a material role in the unlawful acts alleged in this Complaint.

33. When this Complaint refers to any act of any corporation, the allegation means that the corporation engaged in the act by or through its directors, officers, employees, or agents while they were actively engaged in the management, direction, control, or transaction of the corporation's business or affairs.

34. Each of the Defendants named herein acted as the agent or joint-venturer of or for the other Defendants with respect to the acts, violations, and common course of conduct alleged herein.

35. Various other persons, firms, and corporations, that are unknown and not named as Defendants, have participated as co-conspirators with Defendants and have performed acts or made statements in furtherance of the conspiracy.

IV. DEFENDANTS' UNLAWFUL SCHEMES TO ACQUIRE WINDFALL PROFITS ON FX TRANSACTIONS AT THE EXPENSE OF ERISA EMPLOYEE BENEFIT PLANS AND THEIR PARTICIPANTS

A. The FX Market

36. The FX market is the market where currencies are traded. It is the largest and most actively traded financial market in the world. According to the most recent BIS

Triennial Central Bank Survey,¹⁴ global trading in FX averaged \$5.3 trillion per day in April 2013, up from \$4.0 trillion in April 2010.¹⁵ U.S. trading in FX averaged \$1.263 trillion per day in April 2013, up from \$864 billion in April 2010.¹⁶ This growth in FX trading was driven largely by growth in market participation by “other financial institutions,” which include pension funds, mutual funds, insurance companies, and hedge funds.¹⁷

37. Currencies are traded in pairs. In April 2013, the top three currency pairs accounted for over half of all FX market turnover globally: EUR|USD (24.1%), USD|JPY (18.3%), and GBP|USD (8.8%).¹⁸ In April 2013, the U.S. dollar was on one side of 87% of all FX transactions globally¹⁹ and on 89% of all FX transactions in the United States.²⁰

¹⁴ The BIS Triennial Central Bank Survey describes itself as “the most comprehensive source of information on the size and structure of global foreign exchange (FX) and OTC derivatives markets.” Bank for International Settlements, Triennial Central Bank Survey, Foreign exchange turnover in April 2013: preliminary global results (available at <https://www.bis.org/publ/rpfx13fx.pdf>) [hereinafter BIS, Triennial Bank Survey, Preliminary Results 2013], at 3. Central banks, including the Federal Reserve Bank of New York, and other authorities in 53 jurisdictions participated in the survey, collecting data from 1,300 banks and other financial institutions throughout the world. *Id.*

¹⁵ BIS Triennial Bank Survey, Preliminary Results 2013, at 3.

¹⁶ Fed Triennial Bank Survey 2013, at 1.

¹⁷ *Id.* at 3.

¹⁸ BIS Triennial Bank Survey, Preliminary Results 2013, at 3.

¹⁹ *Id.*, Preliminary Results 2013, at Table 2.

²⁰ Fed Triennial Bank Survey 2013, at 4.

38. Three types of FX Instruments account for approximately 95% of transactions in the FX market in the United States:²¹

Spot – An agreement to exchange sums of currency at an agreed on exchange rate on a value date that is within two bank business days' time.

Outright Forward – An agreement to exchange sums of currency at an agreed-on exchange rate on a value date that will be in more than two bank business days' time. The exchange rate for a forward transaction is called the forward outright.

FX Swap – A combination of a spot transaction plus an outright forward done simultaneously, but in the opposite direction.

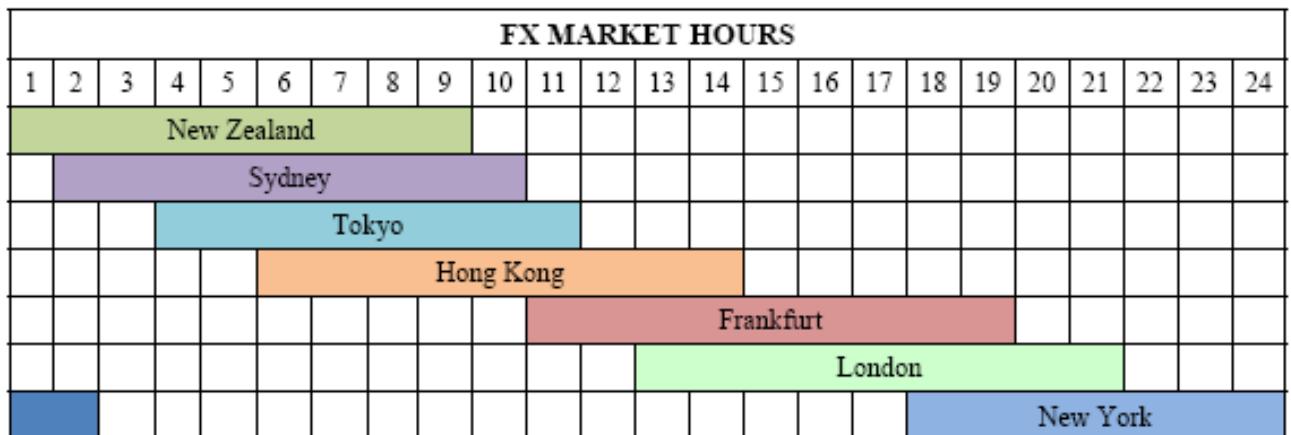
39. The FX market revolves around spot transactions. Both outright forwards and FX swaps are derived from the underlying spot price. Every time the spot price moves, outright forward and FX swap prices move. An outright forward is the spot price plus the interest differential or “cost of carry.” The cost of carry is determined mathematically from the overall cost involved when lending one currency and borrowing another during the period stretching from the spot date until the forward date. Outright rates are quoted in swap points, also called forward points. By adding (premium) or subtracting (discount) swap points from the spot rate, the full outright forward rate is calculated. Similarly, an FX swap is determined by the spot price because it is a simultaneous spot transaction and a reverse outright forward – a spot-forward swap. An FX swap is a contract to buy an amount of the base currency at an agreed rate (spot), and simultaneously resell the same amount of the base currency at a later value date to the same counterparty (outright forward), also at an agreed rate (or vice versa).

40. Trading in the FX market opens on Monday at 7:00 a.m. in New Zealand. One hour later, Sydney, Australia opens. Trading continues throughout Asia as Tokyo,

²¹ Fed Triennial Bank Survey 2013, 3-4.

Hong Kong, and Singapore begin trading. Trading then shifts to parts of Europe. One hour later, London opens. At midday London time, New York opens for trading. New York and London (the two largest FX trading centers) are open simultaneously for several hours, including at 4:00 p.m. London time (11:00 a.m. New York time) when the WM/Reuters Closing Spot Rates are determined. The FX trading day ends at 5:00 p.m. in New York for booking purposes. As New York's day ends, a new trading day reopens in New Zealand. The FX trading week closes on Friday at 5:00 p.m. in New York. With the advent of electronic trading, it is possible to do some trading over the weekends.

41. The following chart graphically illustrates the 24-hour nature of the FX market:



42. Approximately 98% of FX trading occurs over the counter ("OTC")²², meaning that it does not occur on a centralized exchange. For example, to initiate a spot transaction in the OTC market, a customer (such as a member of the Class) contacts a dealer bank (such as one of the Defendants) for a quote, providing the currency and quantity. The dealer quotes a "bid." The bid is the price at which the dealer is willing to

²² BIS Triennial Bank Survey, Preliminary Results 2013, at Table 1.

buy currency. At the same time, the dealer quotes an “ask.” The ask is the price at which the dealer is willing to sell currency. The customer then buys, sells, or passes. The difference between the bid and ask is the “bid-ask spread” and is how the dealer is compensated.

43. Customers execute FX trades either by a telephone call to a salesperson at a dealer bank or through an electronic communications network (“ECN”). An ECN is a computer system that customers can use to place orders with dealer banks over a network. ECN platforms include single-bank proprietary platforms and multibank dealer systems. Multibank dealer systems include platforms such as Reuters, Bloomberg, EBS, KCG Hotspot, and Currenex.

44. The following is a sample conversation between a dealer and customer placing an FX spot trade for immediate execution via an ECN. This conversation would take place in a brief span of time, perhaps less than one minute.²³

²³ David F. DeRosa, FOREIGN EXCHANGE OPERATIONS: MASTER TRADING AGREEMENTS, SETTLEMENT, AND COLLATERAL (Wiley 2014), at 103.

Sample Dealing Conversation (Spot)		Explanation
Customer	HIHI FRIENDS	
Dealer	HIHI	
Customer	EUR ON 50 PLS?	<i>Customer requests a quote from dealer on 50 million euros. Customer does not reveal whether it is a buyer or seller.</i>
Dealer	50 / 55	<i>Dealer quotes its bid-ask spread. This spread equals 1.2350/1.2355, as 1.23 is understood by both parties.</i>
Customer	I SELL	<i>Customer agrees to sell 50 euros at the bid price of 1.2350.</i>
Dealer	VALUE 03AUG2012 TO CONFIRM 50 MIO EUR AGREED AT 1.2350 BUY EUR MY EUR TO BANK LDN THANKS AND BIBI	<i>Dealer confirms the trade and instructs customer to deliver the euros to its bank in London.</i>
Customer	TO CONFIRM 50 MIO EUR I SELL EUR @1.2350 VALUE 03AUG2012 MY USD TO BANK NY THANKS AND BIBI	<i>Customer confirms trade and instructs dealer to deliver the dollars to its bank in New York.</i>

45. In the above example, the dealer buys euros from the customer at 1.2350.

The dealer would also be selling 50 million euros to another customer or group of customers at 1.2355. The dealer buys at 1.2350 and sells at 1.2355, earning the bid-ask spread of .0005 as its compensation as a market-maker. The wider the spread, the more money a dealer makes. Thus, dealers are incentivized to quote wider bid-ask spreads. Competition among dealers, however, narrows bid-ask spreads.

46. Dealers record and analyze their customers' trading histories, such as in the example above. As a result, dealers often can predict a customer's trading patterns, even before a customer places an order. This is particularly sensitive information.

47. Salespeople and traders who work for dealers communicate regularly. Salespeople inform the traders of incoming potential orders, confirm bid and ask prices, and ultimately convey placed orders to the trading desk. Traders are aware of all potential and pending trades that could be processed through their desks.

FX Fixing Rates and Uses

48. While an FX trade may be entered into and executed at any time, customers often use what are called daily fixing rates. A fixing rate is a published exchange rate at a moment in time or over a short interval of time. To place an order at a fixing rate, a customer gives the dealer instructions to buy or sell a quantity of currency at the fixing rate. The dealer guarantees execution at the fixing rate. The European Central Bank Rate and the WM/Reuters Closing Spot Rate are important fixing rates in the FX Spot Market. WM/Reuters publishes its fixing rates for spot rates and forwards.²⁴

49. The most widely used WM/Reuters spot rates are the WM/Reuters Closing Spot Rates for Trade Currencies, which are calculated around 4:00 p.m. London time (11:00 a.m. New York time). WM/Reuters defines Trade Currencies to include, among others, the major currencies traded against the U.S. dollar and the euro.²⁵

50. For Trade Currencies, the WM/Reuters Closing Spot Rates are calculated using the median of a snapshot of bid and ask order rates and actual spot transactions in the 30 seconds before and the 30 seconds after 4:00 p.m. London time (11:00 a.m. in New York). Trades and rates from Currenex, Reuters Dealing 3000, and EBS are used in the validation and calculation.

51. The process for capturing the information used to calculate the WM/Reuters Closing Spot Rates is automated and anonymous. Because these rates are based on the median value of the transactions, the WM/Reuters Closing Spot Rates do

²⁴ The WM Company, WM/Reuters Spot & Forward Rates Methodology Guide (available at <http://bit.ly/1p9jnjo>), at 3 [hereinafter WM/Reuters Guide].

²⁵ *Id.* at 3.

not take the notional size of the quotes and transactions into account; all quotes and transactions are weighted equally.

52. The WM/Reuters forward rates are published as premiums or discounts to the WM/Reuters spot rates.²⁶ Thus, manipulation of the WM/Reuters Spot Rates (as alleged herein) necessarily has an impact on the WM/Reuters forward rates. This is true of other forward rates based in underlying spot fixing rates.

53. Pension funds, health funds, mutual funds, insurance companies, and hedge funds are major participants in the FX market; these entities represent the segment of the FX market with the highest growth rate over the past several years. Many of these entities, however, participate in the FX market in a way that is ancillary to their investing activities, rather than as a primary source of profits. Such entities typically repatriate payments, such as dividends, interest, and redemptions on foreign equity and debt instruments that are paid in foreign currencies to U.S. dollars, and re-balance their portfolios frequently to adjust their proportions of domestic and foreign holdings in response to shifting economic conditions. The WM/Reuters Closing Spot Rates are popular with such entities. Fund performance often is compared to rates of return benchmarked to the WM/Reuters Closing Spot Rates. Executing FX trades at the WM/Reuters Closing Spot Rates removes tracking error when comparing fund performance to indexed benchmarks (such as those created by FTSE Group and MSCI Inc., which track stocks and bonds in multiple countries) or to other portfolios.

54. WM/Reuters spot rates are also customarily used to mark-to-market FX exposures. Before WM/Reuters spot rates became the standard benchmark, portfolio

²⁶ WM/Reuters Guide, at 6.

managers used different methods to mark-to-market, some of which were dependent on a single dealer's quote. WM/Reuters spot rates were rapidly adopted to mark FX exposures to market because the WM/Reuters spot rates had the advantages of universality and independence from any specific dealer.

55. The widespread use and acceptance of WM/Reuters rates as a pricing mechanism and as the primary benchmark for currency trading globally means that the WM/Reuters Closing Spot Rates are crucial to the operation of financial markets.

WM/Reuters Closing Spot Rate Is Vulnerable to Collusion

56. Defendants understood that the methodology used to calculate the WM/Reuters Closing Spot Rates was vulnerable to manipulation. For example, in a July 4, 2008 meeting of the Bank of England's Foreign Exchange Joint Standing Committee, Chief Dealers Sub-Group,²⁷ the WM Company gave a presentation on the median calculation of the WM/Reuters rates to chief currency traders from RBS, HSBC, Deutsche Bank, Morgan Stanley, JPMorgan, and Citigroup. In response to this

²⁷ The Chief Dealers Sub-Group of the Bank of England's Foreign Exchange Joint Standing Committee was established in 2005 for the purpose of facilitating discussions between chief dealers at major dealer banks and Bank of England staff concerning developments in the foreign exchange markets. The Chief Dealers Sub-Group consists of 11 chief traders active in the London FX market and top Bank of England officials. The Chief Dealers Sub-Group meets three to four times per year. Between 2005 and 2013, representatives from Defendants Barclays (2005-2012), Merrill Lynch (Bank of America) (2006-2007), HSBC (2007-2013), JPMorgan (2007-2009, 2011-2013), Morgan Stanley (2005-2008, 2010-2011), Goldman Sachs (2009-2013), BNP Paribas (2009-2013), Deutsche Bank (2005-2012), RBS (2005-2013), UBS (2005-2013), Credit Suisse (2005-2008), and Citigroup (2005-2013), participated in the Chief Dealers Sub-Group. Foreign Exchange Joint Standing Committee Chief Dealers Sub-Group Meeting Minutes, 2005-2013 (available at <http://bit.ly/1eMBcAq> and <http://bit.ly/1kDSdSj>).

presentation, the chief dealers in attendance admitted that the methodology was susceptible to manipulation:

It was noted that WM/Reuters do not use traded volumes data in the calculation of the spot rates. While they have access to Reuters volume data, the same is not the case for EBS data. The Chief Dealer group agreed that actual traded volumes is a key consideration in the calculation of accurate fixings and suggested that this would be a useful next step in the development of WM/Reuters' model. Furthermore it was suggested that using a snapshot of the market may be problematic, as it could be subject to manipulation. Perhaps WM could use a window of observations, and determine at what point to fix using volume data.²⁸

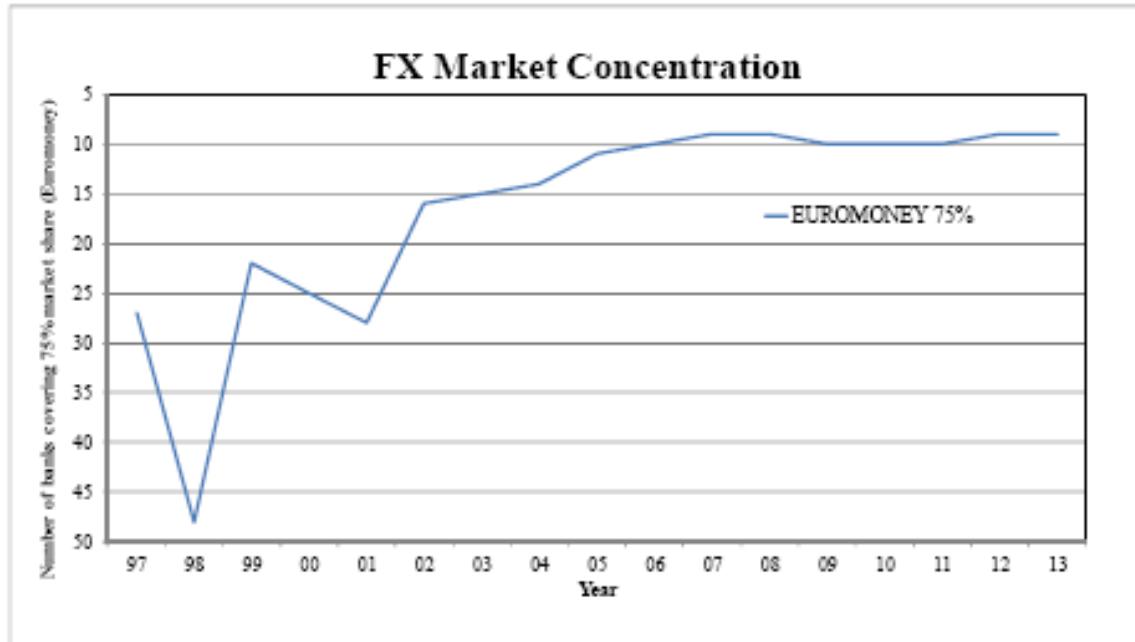
57. As explained below, Defendants²⁹ seized on the weakness in this methodology and colluded to manipulate the WM/Reuters Closing Spot Rates, and other rates in the FX Spot Market.

The FX Market Is Concentrated and Dominated by Defendants

58. Beginning in the late 1990s, the FX market experienced a substantial increase in concentration, with the number of banks covering 75% market share declining:

²⁸ Foreign Exchange Joint Standing Committee Chief Dealers Sub-Group, Draft Minutes of the 4 July 2005 Meeting at HSBC, 8 Canada Square, London E14 5HQ (available at <http://bit.ly/1eMBcAq>), at 71.

²⁹ The government investigations of the FX Rate Collusion Scheme identify at least 12 banking institutions and related corporate entity participants. Eleven of those corporate groups are named in this Complaint as Defendants. A twelfth bank that has been investigated for FX manipulation, which is not named as a Defendant in this Complaint is BNP Paribas Group. This Complaint avers that BNP Paribas participated in the scheme, and the general discussion of the scheme should be read as including BNP Paribas as a participant. Descriptions of Defendants in the Complaint occasionally refer to BNP Paribas, though it is not a Defendant.



59. Defendants now dominate the FX market. According to the 2012 and 2013 FX Surveys by Euromoney, an industry publication, Defendants' individual and aggregate shares of the global FX market in 2012 and 2013 were:

Defendant	2012 Market Share (Rank)	2013 Market Share (Rank)
Deutsche Bank	14.57% (1)	15.18% (1)
Citigroup	12.26% (2)	14.90% (2)
Barclays	10.95% (3)	10.24% (3)
UBS	10.48% (4)	10.11% (4)
HSBC	6.72% (5)	6.93% (5)
JP Morgan	6.60 % (6)	6.07% (6)
RBS	5.86% (7)	5.62% (7)
Credit Suisse	4.68% (8)	3.70% (8)
Morgan Stanley	3.52% (9)	3.15% (9)
Goldman Sachs	3.12% (10)	2.75% (11)
Bank of America	2.41% (12)	3.08% (10)
Defendants' Aggregate Market Share:	81.17%	81.73%

60. Defendants also dominate the U.S. spot market. The Federal Reserve Bank of New York reported that as of April 2013, the top ten banks engaged in 98% of all spot

volume in the FX market, up from 91% in April 2010. Moreover, the five largest banks by volume accounted for 80% of spot transactions in the United States in April 2013.³⁰

61. This rise of ECNs also contributed to the concentration of the FX market. To maintain their market position, Defendants made heavy investments in software and hardware that smaller banks could not afford. Defendants are the best-informed participants in the FX market and have created an information barrier to entry.

62. The FX market has other high barriers to entry. A large amount of capital is required to provide liquidity to customers. FX dealers must provide immediate liquidity to customers based on the assumption that inventory can be offloaded within the day.

63. The FX market is controlled by a small and close-knit group of traders employed by Defendants. As a result of market concentration and the financial crisis, Defendants' FX trading desks have undergone staff reductions, resulting in each bank now having between eight to ten traders. These traders have strong ties formed by working with one another in prior trading positions. Many of these traders also live near each other, many living in the same neighborhoods in the Essex countryside just northeast of London's financial district. They belong to the same social clubs, golf together, dine together, and sit on many of the same charity boards. As Andre Spicer, a professor at the Cass Business School in London, said, "The foreign exchange market has a very strong culture, in which practitioners feel more attached to each other than they do their banks. It is also dominated by an extremely small group of individuals, often with

³⁰ Fed Triennial Bank Survey 2013, at 6.

strong social ties formed by working with each other at some point in the past.”³¹ These social and professional ties in the FX trading community create incentives and opportunities for collusion. As one former Citigroup banker noted, “This is a market in which price fixing and collusion could actually work.”³²

The FX Market Is Unregulated and Opaque

64. Notwithstanding its size, importance, and concentration, the FX market is one of the world’s least regulated financial markets, with most trading taking place away from exchanges. The United States does not have any specific rules or agencies that govern FX spot, outright forward, or FX swap transactions, and such transactions are exempt from the Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. 11-203, 124 Stat.1376 (2010).

65. There is no centralized exchange or institution that collects and posts real-time trade information, such as order flows and volume. While Defendants’ proprietary ECNs allow them to match buyers with sellers, Defendants’ real-time order flow and volume data is not available to the market, as it would be on an exchange, where the entire market knows who is buying and selling at a given moment. Defendants closely guard their real-time order flow and volume data and do not make it commercially available for purchase. What goes on inside these proprietary platforms is known only to the Defendants. Absent an agreement to collude, each bank would not share this

³¹ Liam Vaughan, Gavin Finch and Bob Ivry, *Secret Currency Traders’ Club Devised Biggest Market’s Rates*, BLOOMBERG (Dec. 19, 2013) (available at <http://bloom.bg/1hA9KXj>).

³² Daniel Schäfer, Alice Ross, and Delphine Strauss, *Foreign exchange: The big fix*, FINANCIAL TIMES (Nov. 12, 2013) (available at <http://on.ft.com/OIyUfl>).

information with one another; however, as explained here, Defendants did share this information with one another.

66. Defendants enjoy informational advantages over Plaintiffs and the Class as a result of this market opacity. Knowledge of a customer's identity, trading patterns, and orders allows Defendants to predict the direction of market movements. Defendants' ability to predict – and manipulate – market movements grows when they share this information with one another.

67. The FX market has characteristics that antitrust law and economics have identified as making a market susceptible to collusion and manipulation. These characteristics include domination of the market by relatively few firms, significant barriers to entry, limited regulation, and limited access to real-time pricing and volume information.

B. Defendants Conspired to Manipulate the FX Spot Market

68. Beginning at least as early as January 1, 2003, Defendants conspired to manipulate the FX Spot Market rates such as the WM/Reuters Closing Spot Rates. Defendants communicated with one another, including in chat rooms, via instant messages, and by email, to carry out their conspiracy. Through these communications, Defendants regularly exchanged their customers' confidential order flow information before the London fix, for instance. Based on the shared confidential information, Defendants engaged in concerted trading strategies to manipulate the WM/Reuters Closing Spot Rates, other fixing rates, and the FX Spot Market overall. Those strategies were successful. Defendants' collusive actions allowed them to eliminate their risk in FX trading and to reap supra-competitive profits at the expense of Plaintiffs and the Class.

Defendants Used Electronic Communications, Including Chat Rooms, Instant Messages, and Emails, to Conspire

69. Defendants' top-level traders used electronic communications to meet and conspire for over a decade. Defendants' top-level traders conspired by communicating directly with one another via electronic communications, including chat rooms, instant messages, and email. Defendants brazenly named their chat rooms "The Cartel," "The Bandits' Club," "The Mafia," and "One Team, One Dream." These modern-day electronic chat rooms replaced the classic, smoke-filled backrooms of the past. The transcripts of these chat rooms are reportedly "peppered with allusions to drinks, drugs and women."³³

70. Entry into chat rooms, such as The Cartel, was coveted among traders because of the influence its members exerted in the FX market.

71. Defendants' top-level traders ran the chat rooms. For example, Richard Usher ran The Cartel while he was JPMorgan's chief currency dealer in London and head of spot trading for G-10 currencies from 2010-2013 and as a trader at RBS before then.

72. The Cartel's membership numbered a half-dozen or more of Defendants' top traders. Other members of The Cartel included:

- Rohan Ramchandani, Citigroup's head of spot trading in London;
- Matt Gardiner, Barclays' director of spot trading for EUR|USD from 2007 to 2011;
- Chris Ashton, former head of Barclays voice spot trading globally; and

³³ Daniel Schäfer, Alice Ross, and Delphine Strauss, *Foreign exchange: The big fix*, FINANCIAL TIMES (Nov. 12, 2013) (available at <http://on.ft.com/OIyUfl>).

- Niall O’Riordan, UBS’s co-global head of G-10 and emerging market spot trading.

73. Notably, Usher, Ramchandani, Gardiner, Ashton, and O’Riordan each have been suspended or fired from their respective institutions.

74. Transcripts of The Cartel’s communications reveal that Defendants exchanged information on customer orders and agreed to trading strategies to manipulate the WM/Reuters Closing Spot Rates.³⁴ Often, after manipulating the WM/Reuters Closing Spot Rates, members of The Cartel “would send written slaps on the back for a job well done.”³⁵

75. The chat rooms often focused on manipulating a particular currency pair. For instance, Defendants formed “The Sterling Lads” to manipulate the exchange rate between British pounds sterling and U.S. dollars (GBP|USD or “cable”) – the world’s third most-traded currency pair.

76. As a direct result of the numerous government investigations, Defendants Barclays, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, JPMorgan, Morgan Stanley, RBS, and UBS now ban their traders from participating in multibank chat rooms.

Defendants Shared Confidential Customer Order Information to Manipulate the WM/Reuters Closing Spot Rates

77. Through electronic means, Defendants shared their confidential customer order information with one another. Each Defendant aggregated its client orders to determine what its individual net position in a specific currency was going to be at the

³⁴ Liam Vaughan, Gavin Finch and Bob Ivry, *Secret Currency Traders’ Club Devised Biggest Market’s Rates*, BLOOMBERG (Dec. 19, 2013) (available at <http://bloom.bg/1ibwUXj>).

³⁵ *Id.*

time for fixing the FX rate. Defendants then shared this information with one another to determine their aggregate net position in a specific currency at the fix. By sharing and aggregating their confidential customer order flows, Defendants could determine, in advance, which way the market should move.

78. Defendants' sharing of their confidential customer information violates the Federal Reserve Bank of New York's "Guidelines for Foreign Exchange Trading Activities," which have been in place for decades. Specifically, the Guidelines note:

Confidentiality and customer anonymity are essential to the operation of a professional foreign exchange market. Market participants and their customers expect that their interests and activity will be known only by the other party to the transaction . . . and an intermediary, if one is used.

*It is inappropriate to disclose, or to request others to disclose, proprietary information relating to a customer's involvement in a transaction . . .*³⁶²⁸

* * *

Customer anonymity should not be circumvented with the use of slang or pseudonyms. If confidentiality is broken, management must act promptly to correct the conditions that allowed the event to occur.... *Staff should not pass on confidential and nonpublic information outside of their institution. Such information includes discussions with unrelated parties concerning their trades, their trading positions, or the firm's position.* It is also inappropriate to disclose, or to request others to disclose, information relating to a counterparty's involvement in a transaction

*Trading room staff should take special precautions to avoid situations involving or appearing to involve trading on nonpublic information.*³⁷

³⁶ Federal Reserve Bank of New York, Guidelines for Foreign Exchange Trading Activities, Foreign Exchange Committee (May 2008) (available at <http://bit.ly/1o5okiz>), at 11 (emphasis added).

³⁷ *Id.* at 26 (emphasis added).

79. Defendants have already produced evidence to government investigators confirming that their traders “inappropriately share[d] market-sensitive information with rivals.”³⁸ Evidence obtained by government investigations confirms that “[s]hortly before the fix . . . it was common for a group of senior currency traders to discuss with their competitors the types and volume of trades they planned to place.”³⁹ A transcript provided by RBS to the UKFCA revealed that JPMorgan’s Richard Usher wrote “messages to traders at other firms [that] included details of his trading positions.”⁴⁰ Defendants’ traders confirmed that “chatroom discussions between rival traders . . . allowed them to share information about pricing and order books.”⁴¹

80. A number of Defendants have admitted to the Bank of England that they shared their confidential customer information. On April 23, 2012, the Foreign Exchange Joint Standing Committee, Chief Dealers Sub-Group met at BNP Paribas’ London office. Citigroup’s Rohan Ramchandani, who was a member of The Cartel, was present. James

³⁸ Chiara Albanese, Katie Martin and David Enrich, *Banks Fix on Sales in Probe*, WALL STREET JOURNAL (Nov. 19, 2013) (available at <http://on.wsj.com/P2iHS8>).

³⁹ Katie Martin and David Enrich, *Forex Probe Uncovers Collusion Attempts, Global Investigation Has Reportedly Found London-Based Traders Worked Together in Trying to Manipulate Currencies*, WALL STREET JOURNAL (Dec. 19, 2013) (available at <http://on.wsj.com/1o1Y0Wr>).

⁴⁰ Gavin Finch, Liam Vaughan, and Suzi Ring, *Ex-RBS Trader in U.K. Probe Said to Be JPMorgan’s Usher*, BLOOMBERG (Oct. 14, 2013) (available at <http://bloom.bg/1ip3Yer>).

⁴¹ Daniel Schafer, Alice Ross and Delphine Strauss, *Foreign exchange: The big fix*, FINANCIAL TIMES (Nov. 12, 2013) (available at <http://on.ft.com/OIyUfl>).

Pearson (RBS), and Martin Mallet (Bank of England) were also present.⁴² A person familiar with the UK-FCA's investigation disclosed to the media that a senior trader present at the meeting turned over his meeting notes. According to the notes, the traders told Bank of England officials that they shared information about customer orders before currency benchmarks were set.⁴³ The official meeting minutes concealed the admissions made at the meeting.⁴⁴

81. In March 2014, the Bank of England suspended a staff member as it launched an internal investigation into whether employees knew about or condoned manipulation of the WM/Reuters Closing Spot Rates. The Bank of England's investigation included the search and review of 15,000 emails, 21,000 Bloomberg and Reuters chat room transcripts, and more than 40 hours of telephone records.

82. At least four chief traders who participated in the Bank of England's Chief Dealers Sub-Group have been suspended or terminated by their institutions. Richard Usher (JPMorgan) was placed on leave in October 2013. Rohan Ramchandani (Citigroup) was placed on leave in October 2013 and then terminated in January 2014. Robert de Groot (BNP Paribas and Citigroup) was suspended in March 2014. Niall

⁴² Foreign Exchange Joint Standing Committee Chief Dealers, Minutes of the 23 April 2012 12pm Meeting at BNP Paribas, 10 Harewood Avenue, London, NW1 6AA (available at <http://bit.ly/1kDSdSj>).

⁴³ Suzi Ring, Gavin Finch and Liam Vaughan, *BOE Staff Said to Have Condoned Currency Traders' Conduct*, BLOOMBERG (Feb. 7, 2014) (available at <http://bloom.bg/1d5bQmn>).

⁴⁴ Foreign Exchange Joint Standing Committee Chief Dealers, Minutes of the 23 April 2012 12pm Meeting at BNP Paribas, 10 Harewood Avenue, London, NW1 6AA (available at <http://bit.ly/1kDSdSj>).

O’Riordan (UBS) was suspended in October 2013. As detailed herein, Usher, Ramchandani, and O’Riordan were also members of The Cartel.

Using Shared Information, Defendants Agreed to Execute Concerted Trading Strategies to Manipulate the FX Spot Market

83. By sharing their individual trading positions, Defendants gained an understanding of the overall order flows across the FX market. According to traders, banks “would share details of orders with brokers and counterparts at banks through instant messages to align their strategies” and “improve their chances of getting the desired move in the benchmark.”⁴⁵

84. A Bloomberg article from June 12, 2013, reported that current and former employees of some of the world’s largest banks disclosed the banks have “been front-running client orders and rigging WM/Reuters rates by pushing through trades before and during the 60-second windows when the benchmarks are set.”⁴⁶

85. Former and current FX traders and persons familiar with the government and internal investigations have revealed some details of Defendants’ collusive manipulation of the WM/Reuters Closing Spot Rates. Defendants’ tactics include “front running/trading ahead,” “banging the close,” and “painting the screen.”

86. Traders “front run” on customer information when they receive customer orders that could move the market and then trade their own proprietary positions before executing their customers’ market-moving trades. Large client orders come from, for example, tracker funds, which typically place orders as much as an hour before the

⁴⁵ Liam Vaughan, Gavin Finch and Ambereen Choudhury, *Traders Said to Rig Currency Rates to Profit Off Clients*, BLOOMBERG (June 11, 2013) (available at <http://bloom.bg/1qGQ3oy>).

⁴⁶ *Id.*

WM/Reuters Closing Spot Rates are set. Such an order gives traders information about the direction the market will move, and traders from the largest dealer banks have admitted that they use the information to take positions that benefit the bank – to the detriment of the customer.

87. According to a former trader, even one large transaction can move the market. The trader stated:

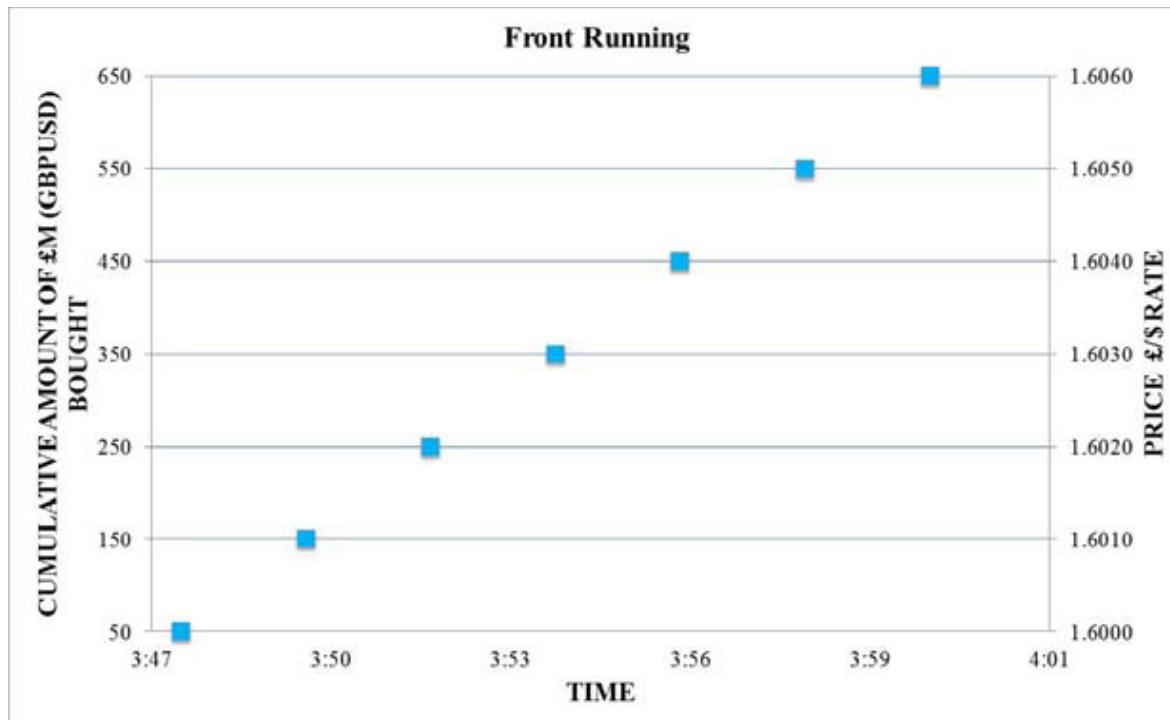
[I]f he received an order at 3:30 p.m. to sell 1 billion Euros (\$1.3 billion) in exchange for Swiss francs at the 4 p.m. fix, he would have two objectives: to sell his own euros at the highest price and also to move the rate lower so that at 4 p.m. he could buy the currency from his client at a lower price. He would profit from the difference between the reference rate and the higher price at which he sold his own euros. A move in the benchmark rate of 2 basis points [0.02 percent], would be worth 200,000 francs (\$216,000).⁴⁷

88. Nevertheless, absent collusion, a Defendant “front running” the market would still face risk that another Defendant with a larger position could trade in the opposite direction at the same time. If this were to happen, the Defendant’s strategy would backfire, and the Defendant would, in industry parlance, get “run over.” For instance, if the trader in the example above decided to sell 1 billion euros in exchange for Swiss francs, but another market participant traded the opposite direction and sold Swiss francs for 2 billion euros, the market price would move higher, not lower, as the trader had anticipated based on his client’s order. If, as a consequence, the market moved 2 basis points higher, the trader would lose 200,000 francs (\$216,000) on the transaction.

⁴⁷ Liam Vaughan, Gavin Finch and Ambereen Choudhury, *Traders Said to Rig Currency Rates to Profit Off Clients*, BLOOMBERG (June 11, 2013) (available at <http://bloom.bg/1qGQ3oy>); Liam Vaughan, Gavin Finch and Bob Ivry, *Secret Currency Traders’ Club Devised Biggest Market’s Rates*, BLOOMBERG (Dec. 19, 2013) (available at <http://bloom.bg/1ibwUXj>).

89. To avoid this risk, Defendants agreed to “front run” together by “improperly working as a pack” and agreeing “to a sequence for placing their own trades to their advantage.”⁴⁸

90. The following front running example illustrates the trading mechanics of front running.



3:45pm A customer calls Defendant's FX desk to convert some of its U.S. dollars into £600m of sterling. The customer asks if the trade can be settled at the market benchmark price, the WM/Reuters Closing Spot Rate.

3:48pm The trader immediately buys £50m (“front running”) for Defendant bank’s own trading account at the market price of 1.6000 dollars to the pound. The trader

⁴⁸ Katie Martin and David Enrich, *Forex Probe Uncovers Collusion Attempts*, WALL STREET JOURNAL (Dec. 19, 2013) (available at <http://on.wsj.com/1h7x0j4>); Liam Vaughan, Gavin Finch and Ambereen Choudhury, *Traders Said to Rig Currency Rates to Profit Off Clients*, BLOOMBERG (June 11, 2013) (available at <http://bloom.bg/1qGQ3oy>); Liam Vaughan, Gavin Finch and Bob Ivry, *Secret Currency Traders’ Club Devised Biggest Market’s Rates*, BLOOMBERG (Dec. 19, 2013) (available at <http://bloom.bg/1ibwUXj>).

knows he has a very large amount of pounds to buy over the next 12 minutes that will move the market higher.

3:50pm The £50m trade has caused the price of pounds to tick up to 1.6010, and the trader buys £100m at that price. He repeats this trade every two minutes, which drives the price higher each time. He stops when he has bought a total of £600m for his client by 4:00 p.m. at an average price of 1.6035.

3:52pm The trader buys £100m at an average rate of 1.6020 moving the price higher.

3:54pm The trader buys £100m at an average rate of 1.6030 moving the price higher.

3:56pm The trader buys £100m at an average rate of 1.6040 moving the price higher.

3:58pm The trader buys £100m at an average rate of 1.6050 moving the price higher.

4:00pm The trader buys the final £100m at an average rate of 1.6060. The WM/Reuters Closing Spot Rate is calculated at 1.6060. The trader fills the customer's order at the WM/Reuters Closing Spot Rate of 1.6060, thereby selling £600m to the client, leaving him with only a £50m exposure, which he sells into the market at 1.6060.

91. The trader filled his customer's order and sold the £50m he bought for the Defendant bank at the higher market rate. As a result, the customer received his £600m at a cost of \$963.6 million (£600m x 1.6060). However, Defendant bank has only paid \$962.1 million (£600m x the average price of 1.6035), meaning it made \$1.5 million from the customer's transaction. In addition, the trader gained \$300,000 on the £50m "front running" side bet, and in total, made \$1.8 million for the Defendant bank in the 15 minutes before the 4:00 p.m. London fix.⁴⁹

92. Defendants also engaged in "banging the close" to manipulate the WM/Reuters Closing Spot Rates and the FX Spot Market and thereby fix the prices of FX Transactions. "Banging the close" occurs when traders break up large customer

⁴⁹ Simon Goodley, *The foreign exchange trader: 'the closer you get to 4pm, the less the risk'*, THE GUARDIAN (Mar. 12, 2014) (available at <http://gu.com/p/3nftn/sbl>).

orders into small trades and concentrate the trades in the moments before and during the 60-second fixing window in order to spike the published rates up or down. For instance, because the WM/Reuters Closing Spot Rates are based on the median of trades during the calculation window and not weighted for the average notional amount of a transaction, the rates are susceptible to manipulation by banging the close. That is, 100 trades of \$1 will impact the WM/Reuters Closing Spot Rates to a greater degree than a single trade of \$100.

93. As explained by numerous sources, “[t]o maximize profits, dealers would buy or sell client orders in installments during the 60-second window to exert the most pressure possible on the published rate. . . . Because the benchmark is based on the median of transactions during the period, placing a number of smaller trades could have a greater impact than one big deal.”⁵⁰

94. Defendants also manipulated the WM/Reuters Closing Spot Rates and the FX Spot Market and thereby fixed the prices of FX Transactions by “painting the screen.” Painting the screen occurs when Defendants place phony orders with one another to create the illusion of trading activity in a given direction in order to move rates prior to the fixing window. After the WM/Reuters Closing Spots Rates were calculated, for instance, Defendants reversed those trades.

95. Thus, by agreeing in chat rooms and instant messages to “front run” the execution of customer orders, “bang the close,” and “paint the screen,” Defendants

⁵⁰ Liam Vaughan, Gavin Finch and Ambereen Choudhury, *Traders Said to Rig Currency Rates to Profit Off Clients*, BLOOMBERG (June 11, 2013) (available at <http://bloom.bg/1qGQ3oy>).

manipulated the WM/Reuters Closing Spot Rates and the FX Spot Market and thereby fixed the prices of the FX Transactions.

96. Absent collusion and manipulation, executing trades in the FX Spot Market would pose more risk for Defendants than other order types. It poses more risk because, by agreeing to trade at a rate determined sometime in the future (even the relatively near future), there would be, in the absence of collusion, an increased risk that the market would move against Defendants. Despite this increase in risk, Defendants commonly incentivized their sales forces, through items such as increased “sales credits,” to execute transactions at fixing times such as the WM/Reuters Closing Spot Rates.

97. In recent testimony before the Treasury Committee of the House of Commons, Bank of England governor, Dr. Mark Carney, elaborated:

[T]he dealers want a quiet life. They want the ability to both promise to their clients that they will deliver the 4 pm fix and not have any risk in delivering that promise. Other market activity around the 4 pm fix by others, whether they are hedge funds, asset managers, corporate, whatever, will make that promise riskier.

That is the dealer’s job. That is the dealer’s job, in making that promise. What they have done, which is alleged and which is being investigated around the world, is that having developed a pattern of making those promises, they decided to cheat to make their life easier, to collude across the dealers

* * *

Easier and richer sometimes goes together – it does not always go together – to buy happiness. That is what is being alleged, so you have a circumstance, and obviously, I was not present at the meeting and one reads into the minutes, where you have a circumstance where you have volatility because of the market functioning, and the dealers want to change that. What is being investigated is whether they tried to change it by colluding, sharing client information and doing above and beyond. That is fundamentally against the principles of fair markets. It is unacceptable and it has to be prosecuted to the full extent of the law⁵¹

⁵¹ House of Commons, Treasury Department, Oral Evidence: The Foreign Exchange Market Review, HC 1147 (Mar. 11, 2014) (available at <http://bit.ly/1h0YSB1>).

C. Government Investigations

98. Law enforcement and regulatory authorities in the United States, United Kingdom, European Union, Switzerland, Germany, Asia, Australia, New Zealand, and the international Financial Stability Board have been actively investigating Defendants' conduct in the FX market since at least 2013.

U.S. Department of Justice ("DOJ")

99. On October 29, 2013, Acting Assistant Attorney General Mythili Raman (acting head of the DOJ's Criminal Division) confirmed that the DOJ's Criminal and Antitrust Divisions are actively investigating Defendants' manipulation of FX benchmark rates, including the WM/Reuters Closing Spot Rates. The DOJ confirmed that several banks agreed to produce information relating to FX benchmark rates pursuant to their obligations under deferred prosecution and non-prosecution agreements reached in connection with the DOJ's investigation into the manipulation of LIBOR:

As part of our Libor resolutions, there have been pledges by banks to cooperate and indeed requirements by banks to cooperate not just in connection with Libor but all benchmark manipulations.⁵²

That's one of the most significant benefits that law enforcement has been able to secure as part of this [LIBOR] investigation.⁵³

100. Specifically, the DOJ entered into deferred prosecution and non-prosecution agreements with Defendants Barclays, UBS, and RBS in connection with

⁵² FT Reporters, *Day of reckoning as European banks' bill for misconduct mounts*, FINANCIAL TIMES (Oct. 29, 2013) (available at <http://on.ft.com/1kIBkG4>).

⁵³ M. Rochan, *FX Fixing Scandal: US Justice Department Confirms Currency Investigation*, INTERNATIONAL BUSINESS TIMES (Oct. 30, 2013) (available at <http://bit.ly/OBZ7fh>).

LIBOR investigations. Those agreements required Barclays, UBS, and RBS to provide information relating to benchmark manipulation, including manipulation of FX benchmark rates.

- a. On June 26, 2012, Defendant Barclays submitted to a Non-Prosecution Agreement with DOJ relating to LIBOR and EURIBOR manipulation.⁵⁴ Barclays admitted to submitting false figures for LIBOR and EURIBOR. In addition, Barclays paid \$451 million in penalties to U.S. and U.K. regulators in connection with LIBOR manipulation.
- b. On December 18, 2012, Defendant UBS submitted to a Non-Prosecution Agreement with DOJ relating to UBS's manipulation of LIBOR, EURIBOR, and TIBOR.⁵⁵ UBS agreed to pay a \$1.5 billion in penalties to U.S., U.K., and Swiss regulators.
- c. On February 5, 2013, Defendant RBS submitted to a Deferred Prosecution Agreement with DOJ relating to Yen LIBOR and Swiss Franc LIBOR manipulation.⁵⁶ RBS agreed to pay \$612 million in penalties to U.S. and U.K. regulators.

101. DOJ stated that “[t]he cooperation that we have been able to secure as part of our agreements in the Libor investigation has been very helpful to us in terms of holding banks' feet to the fire.”⁵⁷ DOJ further stated that these cooperation provisions

⁵⁴ Barclays Non-Prosecution Agreement, June 26, 2012, at 2 (available at <http://www.justice.gov/iso/opa/resources/337201271017335469822.pdf>); Appendix A, Statement of Facts (available at <http://www.justice.gov/iso/opa/resources/9312012710173426365941.pdf>).

⁵⁵ UBS Non-Prosecution Agreement December 18, 2012, at 3 (available at <http://www.justice.gov/iso/opa/resources/1392012121911745845757.pdf>); Appendix A, Statement of Facts, (available at <http://www.justice.gov/iso/opa/resources/6942012121911725320624.pdf>).

⁵⁶ RBS Deferred Prosecution Agreement, February 5, 2013, at ¶ 6 (available at <http://www.justice.gov/criminal/vns/docs/2013/02/2013-02-rbs-dpa.pdf>).

⁵⁷ Tom Schoenberg and David McLaughlin, *Banks Aid U.S. Forex Probe, Fulfilling Libor Accords*, BLOOMBERG (Jan. 23, 2014) (available at <http://bloom.bg/1cYkwUB>).

have produced “tangible, real results.” The cooperation “expanded our investigations into the possible manipulation of foreign exchange and other benchmark rates.”⁵⁸

102. A person familiar with the DOJ’s investigation stated that banks are providing the DOJ with witness lists, making employees available for interviews, and providing documents.⁵⁹

103. In November 2013, the DOJ and FBI agents questioned Robert Wallden, a director in Deutsche Bank’s foreign exchange trading unit, at his New York home. Agents questioned Wallden about transcripts of an electronic chat where he boasted “about his ability to influence currency markets.”⁶⁰ Wallden, along with two other New York Deutsche Bank executives, Diego Moraiz and Christopher Fahy, were fired on February 14, 2014.⁶¹

104. The DOJ has also questioned executives at BNP Paribas as part of its investigation into FX market manipulation.⁶² As of March 6, 2014, BNP Paribas had suspended its head of FX spot trading, Robert De Groot.⁶³

⁵⁸ *Banks Aid US Forex Probe to Fulfill Duty in Libor Settlements*, MONEYNEWS (Jan. 23, 2014) (available at <http://nws.mx/1h6KY0G>).

⁵⁹ *Id.*

⁶⁰ David Enrich, Katie Martin and Jenny Strasburg, *FBI Tries New Tactic in Currency Probe*, WALL STREET JOURNAL (Nov. 20, 2013) (available at <http://on.wsj.com/OIgEmq>).

⁶¹ Paritosh Bansal and Emily Flitter, *Exclusive: Deutsche fires three New York forex traders—source*, REUTERS (Feb. 4, 2014) (available at <http://reut.rs/1dAVufP>).

⁶² Katherine Rushton, *BNP Paribas faces quiz on currency rate scandal*, THE TELEGRAPH (Nov. 10, 2013) (available at <http://bit.ly/1kSG0sT>).

⁶³ Lionel Laurent, Anirban Nag, and Jamie McGeever, *BNP Paribas’s head of forex spot-trading suspended: WSJ*, REUTERS (Mar. 6, 2014) (available at <http://reut.rs/1hlK7x6>).

105. Then-United States Attorney General Eric Holder publicly commented on the DOJ's probe. In November 2013, the Attorney General stated that "the manipulation we've seen so far may just be the tip of the iceberg"; that "we've recognized that this is potentially an extremely consequential investigation"; and that the DOJ's criminal and antitrust divisions are "taking a leading role" in "the truly global investigation."⁶⁴

106. In November 2013, Deputy Attorney General James Cole commented further on the DOJ's investigation:

The department's criminal and antitrust divisions along with the FBI, regulators and other law enforcement agencies around the world are aggressively investigating possible manipulation of foreign-exchange rates involving a number of financial institutions.⁶⁵

107. On February 7, 2014, Reuters reported that UBS approached the DOJ in September 2013 with information relating to the FX probe in hope of gaining antitrust immunity under the Antitrust Division's Leniency Program.⁶⁶ UBS uncovered incriminating chats by traders and turned over the evidence to the DOJ as part of UBS's application for amnesty.

⁶⁴ Ben Protess, Landon Thomas Jr. and Chad Bray, *U.S. Investigates Currency Trades by Major Banks*, NEW YORK TIMES DEALBOOK (Nov. 14, 2013) (available at <http://nyti.ms/1fP5Atu>).

⁶⁵ Tom Schoenberg, *U.S. 'Aggressively' Probing Possible Currency Rigging*, BLOOMBERG, (Nov. 18, 2013) (available at <http://bloom.bg/1jfAaV2>).

⁶⁶ Jamie McGeever, *UBS seeks first-mover immunity in U.S. currency probe – sources*, REUTERS (Feb. 7, 2014) (available at <http://reut.rs/1fBofJ1>); Lindsay Fortado, Keri Geiger, and David McLaughlin, *UBS Said to Seek Immunity in FX-Rigging Probes by EU, US*, BLOOMBERG (Feb. 24, 2014) (available at <http://bloom.bg/Q16aj9>).

Additional United States and State Investigations

108. Other state and federal authorities in the United States are actively investigating manipulation of FX benchmark rates, including the WM/Reuters Closing Spot Rates.

- a. The U.S. Commodities Futures Trading Commission (“CFTC”) asked major currency-dealing banks, including Defendants Deutsche Bank and Citigroup, to produce records as part of a probe into currency market manipulation.
- b. The Federal Reserve Bank and Office of Comptroller of the Currency are investigating FX manipulation. Officials visited Citigroup’s Canary Wharf office in London during its preliminary stage of information gathering.
- c. The New York Department of Financial Services opened an investigation of several banks in connection with FX rate market manipulation. The New York Department of Financial Services subpoenaed several banks, including Defendants Credit Suisse, RBS, Citigroup, Deutsche Bank, Barclays, and Goldman Sachs, requesting emails and instant messages from currency traders.⁶⁷
- d. The U.S. Securities and Exchange Commission (“SEC”) is investigating whether currency traders distorted prices for options and exchange-traded funds by rigging benchmark FX rates.

United Kingdom Financial Conduct Authority (“UK-FCA”)

109. The UK-FCA is actively investigating manipulation of benchmark FX rates, including the WM/Reuters Closing Spot Rates. UK-FCA has investigative and enforcement powers with respect to financial services providers.

110. On October 16, 2013, the UK-FCA issued the following statement:

⁶⁷ The New York Department of Financial Services investigation does not include banks that maintain bank charters outside of New York’s purview. Those include Morgan Stanley, JPMorgan, Bank of America, and Citigroup, whose international bank charters place them under a different authority.

We can confirm that we are conducting investigations alongside several other agencies into a number of firms relating to trading on the foreign exchange (forex) market.

As part of this we are gathering information from a wide range of sources including market participants. Our investigations are at an early stage and it will be some time before we conclude whether there has been any misconduct which will lead to enforcement action.

We will not comment further on our investigations.⁶⁸

111. On February 4, 2014, John Griffith-Jones, Chairman of the UK-FCA, and Martin Wheatley, CEO of the UK-FCA, testified before the House of Commons Treasury Committee about FX rates. In response to numerous questions about the UK-FCA's FX investigation, Wheatley stated:

[T]he elements [of the FX investigation] that are different than LIBOR is that it's a much deeper, much more liquid market based on real trades. The elements that are similar to LIBOR, and this is purely on what's reported, is that the suggestions of collusion between individuals at a number of firms and the use of chat rooms and phones to collude to influence prices. But we're still in the investigation phase, so I can't really comment too much on any findings other than to say that the allegations are every bit as bad as they have been with LIBOR.⁶⁹

[G]iven what's come out, no, people will not trust the way the rates are fixed.⁷⁰

[A]round ten banks have themselves volunteered information that said they have been asked for information.⁷¹

I don't think we will get to final conclusions within 2014, I hope that we will next year, but again the nature of these sort of investigations is that it's very hard to

⁶⁸ Financial Conduct Authority, *Statement on foreign exchange market investigation*, Oct. 16, 2013 (available at <http://bit.ly/1oKO2FZ>); see also *Financial Conduct Authority joins foreign exchange probe*, BBC (Oct. 17, 2013) (available at <http://bbc.in/1plBflx>).

⁶⁹ Video recording, House of Commons Treasury Committee meeting (Feb. 4, 2014) (available at <http://bit.ly/1j3Y06g>), at 1:13:42 -1:14:11.

⁷⁰ *Id.* at 1:14:20-1:14:24.

⁷¹ *Id.* at 1:15:04-1:15:10.

predict.⁷²

112. The UK-FCA's investigation has focused on an electronic chat room used by top traders at financial institutions. Defendant RBS produced emails and instant messages to the UK-FCA, including The Cartel chat room activities of former RBS and JPMorgan trader Richard Usher. Usher has been specifically identified in the UK-FCA's investigation of FX manipulation, as a result of instant messages he sent during his time at RBS. These messages reportedly included details of his trading positions.⁷³ The UK-FCA has also asked Morgan Stanley to provide details in relation to its FX operations. In addition, approximately 40 traders have individually interviewed with the UK-FCA and produced communications dating back to 2004.

European Commission (“EC”)

113. EC's Competition Commissioner, Joaquin Almunia, acknowledged its investigation of the FX market, and in particular, manipulation of FX benchmark rates, including the WM/Reuters Closing Spot Rates. Almunia said EC learned of activities that “could mean violation of competition rules around the possible manipulation of types of exchange rates.”⁷⁴ During a press conference in December 2013, Almunia stated that EC

⁷² Videorecording, House of Commons Treasury Committee meeting (Feb. 4, 2014) (available at <http://bit.ly/1j3Y06g>), at 1:17:13-1:17:22.

⁷³ Gavin Finch, Liam Vaughan, and Suzi Ring, *Ex-RBS Trader in U.K. Probe Said to Be JPMorgan's Usher*, BLOOMBERG (Oct. 14, 2013) (available at <http://bloom.bg/1ip3Yer>).

⁷⁴ Aoife White and Gaspard Sebag, *EU Regulators Start Inquiry Into Currency Rate-Manipulation*, BLOOMBERG (Oct. 7, 2013) (available at <http://bloom.bg/1plDnji>).

was “looking very carefully at Forex.”⁷⁵ Almunia also stated, “We have internal information regarding possible manipulation of forex benchmarks . . . We are in the preliminary steps.”⁷⁶ A person familiar with the EC’s investigation stated that banks are queuing up to provide incriminating information “of startling quality.”⁷⁷

Switzerland

114. Swiss authorities are actively investigating manipulation of FX benchmark rates, including the WM/Reuters Closing Spot Rates. On September 30, 2013, the Swiss Competition Commission (“Swiss WEKO”) opened a preliminary investigation into manipulation of FX markets after learning about discussions about FX rates between banks. Swiss WEKO stated, “[t]hrough discussions they are said to have manipulated various exchange rates.”⁷⁸ On March 31, 2014, WEKO provided additional details on its investigation, noting that the banks it is investigating included Defendants UBS, Credit Suisse, JPMorgan, Citigroup, Barclays, and RBS, among others. WEKO stated that “[t]he possible actions include the following: the exchange of confidential information, the general co-ordination of transactions with other market participants at agreed price levels, co-ordinated actions to influence the WM/Reuters fix as well as the co-ordination of the

⁷⁵ Graeme Wearden and Nick Fletcher, *Banks fined record €1.7 billion by EC over rate-fixing cartel scandal – as it happened*, THE GUARDIAN (Dec. 4, 2013) (available at <http://bit.ly/1plDAmy>).

⁷⁶ Conor Humphries, *EU Commission looking into possible forex manipulation – Almunia*, REUTERS (Dec. 5, 2013) (available at <http://reut.rs/1dlaW5n>).

⁷⁷ FT Reporters, *Forex in the spotlight*, FINANCIAL TIMES (Feb. 16, 2014) (available at <http://on.ft.com/1kVisGt>).

⁷⁸ *Swiss anti trust watchdog probes banks over FX manipulation*, REUTERS (Oct. 4, 2013) (available at <http://reut.rs/1oKSbcW>).

sale and purchase of currencies in relation to certain third parties.”⁷⁹ Finally, WEKO stated that “[t]here are indications that these banks went into anti-competitive agreements to manipulate price rates in foreign exchange trading.”⁸⁰

115. In addition, on October 4, 2013, Financial Market Supervisory Authority (“Swiss FINMA”), Switzerland’s main market regulator, announced that it was “currently conducting investigations into several Swiss financial institutions in connection with possible manipulation of foreign exchange markets.” Swiss FINMA indicated multiple banks around the world were potentially implicated. Swiss FINMA “is coordinating closely with authorities in other countries.”⁸¹

Germany

116. Germany’s top financial regulator, the Federal Financial Supervisory Authority (“BaFin”), is actively investigating manipulation of FX benchmark rates, including the WM/Reuters Closing Spot Rates. BaFin has made its FX investigation a top priority and moved it into a “special investigation” category.⁸² According to a BaFin spokesperson’s statement on January 16, 2014, “Bafin is presently investigating the facts and has kept an eye on the currency trading issues since the summer.”⁸³ That same day,

⁷⁹ Daniel Schäfer, *Swiss and UK watchdogs launch forex investigations*, FINANCIAL TIMES (Mar. 31, 2014) (available at <http://on.ft.com/1dKuO1P>).

⁸⁰ *Id.*

⁸¹ Press Release, *FINMA is investigating possible manipulation of foreign currency exchange rates* (Oct. 4, 2013) (available at <http://bit.ly/1kSJ20a>).

⁸² Jamie McGeever, *German watchdog to visit Deutsche in London in FX probe: source*, REUTERS (Jan. 20, 2014) (available at <http://reut.rs/1gJHAYP>).

⁸³ Jeff Patterson, *Forex Scandal Deepens, Deutsche Bank Moves To Suspend Latin-Based Traders*, FOREX MAGNATES (Jan. 16, 2014) (available at <http://bit.ly/1f3fZT4>).

BaFin's President, Elke Koenig, stated that the allegations of FX manipulation are "particularly serious because such reference values are based – unlike Libor and Euribor – typically on transactions in liquid markets and not on estimates of the banks."⁸⁴ BaFin representatives reportedly visited the London offices of Defendant Deutsche Bank.⁸⁵

Hong Kong Monetary Authority ("HK-MA")

117. In October 2013, HK-MA confirmed it was in cooperating with other regulators about their ongoing FX investigations, stating: "The Hong Kong Monetary Authority is aware of the allegations. We have been in communications with the relevant overseas regulators and following up with individual banks."⁸⁶

Monetary Authority of Singapore ("SG-MA")

118. Singapore is Asia's largest FX center and the world's third largest FX trading hub (behind London and New York), averaging \$383 billion per day of FX turnover in April 2013.⁸⁷ SG-MA confirmed that it "has been in touch with foreign regulators on the issue of alleged manipulation in the WM/Reuters foreign exchange benchmark rates. We stand ready to assist in their investigations."⁸⁸

⁸⁴ Karin Matussek and Oliver Suess, *Metals, Currency Rigging Is Worse Than Libor, Bafin Says*, BLOOMBERG (Jan. 17, 2014) (available at <http://bloom.bg/1kSKShR>).

⁸⁵ Jamie McGeever, *German watchdog to visit Deutsche in London in FX probe: source*, REUTERS (Jan. 20, 2014) (available at <http://reut.rs/1gJHAYP>).

⁸⁶ *Hong Kong says looking into forex manipulation allegations*, REUTERS (Oct. 16, 2013) (available at <http://reut.rs/1gcjTxe>).

⁸⁷ Fed Triennial Bank Survey 2013, at 14.

⁸⁸ Anjani Trivedi, *Singapore Joins Global Currency-Market Probe, Regulators Around the World Are Looking Into Whether Traders Rigged Rates*, WALL STREET JOURNAL (Oct. 24, 2013) (available at <http://on.wsj.com/1dbJpmo>).

Australia Securities and Investment Commission (“ASIC”)

119. ASIC announced it commenced a probe into rigging by banks in the FX markets. Greg Medcraft, chairman of ASIC stated, “[w]e are commencing a review to ascertain whether any misconduct relating to foreign exchange trading may have occurred in Australia. And whether from an Australian perspective ASIC has concerns about the foreign exchange market.”⁸⁹ Australia is cooperating with other regulators throughout the world.

New Zealand

120. In 2014 New Zealand’s Commerce Commission also announced an investigation into the FX market.⁹⁰

Financial Stability Board (“FSB”)

121. The FSB is an international body that was established in April 2009 as the successor to the Financial Stability Forum (“FSF”). The FSB coordinates regulation for the Group of Twenty (“G20”) leading economies, organizing the work of national financial authorities and international standard setting bodies. The FSB includes all G20 major economies, FSF members, and the EC. The FSB set up a task force in 2013 to try to repair or replace tarnished financial benchmarks in the wake of LIBOR manipulation.

122. On July 15, 2014, the FSB’s Foreign Exchange Benchmark Group issued a consultative document presenting a set of draft recommendations for comment from a wider group of stakeholders to address the FX financial benchmarks it had investigated.⁹¹

⁸⁹ Jamie Smyth, Paul Davies, and Daniel Schäfer, *Australia regulators to probe forex market*, FINANCIAL TIMES (Mar. 19, 2014) (available at <http://on.ft.com/1iOaTOY>).

⁹⁰ *Commerce Commission launches forex probe*, THE NEW ZEALAND HERALD (Mar. 31, 2014) (available at <http://bit.ly/1rZBVaG>).

123. The FSB report stated:

This market structure creates optics of dealers ‘trading ahead’ of the fix even where the activity is essentially under instruction from clients. Worse, it can create an opportunity and an incentive for dealers to try to influence the exchange rate – allegedly including by collusion or otherwise inappropriate sharing of information – to try to ensure that the market price at the fix generates a rate which ensures a profit from the fix trading.⁹²

124. The FSB indicated that it would welcome comment on this document by 12 February 2015.⁹³

D. Defendants’ Public Filings Confirm Investigations and Cooperation

125. Numerous public filings by Defendants confirm the existence of government investigations and the cooperation of certain Defendants with those investigations.

126. Defendant Bank of America’s Form 10-K disclosed:

Government authorities in North America, Europe and Asia are conducting investigations and making inquiries of a significant number of FX market participants, including the Corporation, regarding conduct and practices in certain FX markets over multiple years. The Corporation is cooperating with these investigations and inquiries.⁹⁴

⁹¹ Financial Stability Board, *Consultative Document: Foreign Exchange Benchmarks* (July 15, 2014) (available at: http://www.financialstabilityboard.org/wp-content/uploads/r_140715.pdf).

⁹² *Id.*

⁹³ *Public Responses To The November 2014 Proposed Standards And Processes For Global Securities Financing Data Collection And Aggregation* (Feb. 26, 2015) (available at: <http://www.financialstabilityboard.org/2015/02/public-responses-to-the-november-2014-proposed-standards-and-processes-for-global-securities-financing-data-collection-and-aggregation/>).

⁹⁴ Bank of America, Annual Report (Form 10-K), at 228 (Feb. 25, 2014).

127. Defendant Barclays disclosed in its full-year 2013 financial results statement:

Various regulatory and enforcement authorities, including the FCA in the UK, the CFTC and the DOJ in the US and the Hong Kong Monetary Authority have indicated that they are investigating foreign exchange trading, including possible attempts to manipulate certain benchmark currency exchange rates or engage in other activities that would benefit their trading positions. . . . BBPLC has received enquiries from certain of these authorities related to their particular investigations, and from other regulators interested in foreign exchange issues. The Group is reviewing its foreign exchange trading covering a several year period through October 2013 and is cooperating with the relevant authorities in their investigations.⁹⁵

128. Defendant Citigroup's Form 10-Q disclosed:

Government agencies in the U.S. and other jurisdictions are conducting investigations or making inquiries regarding trading on the foreign exchange markets. Citigroup has received requests for information and is cooperating with the investigations and inquiries and responding to the requests.⁹⁶

129. Defendant Deutsche Bank's quarterly earnings report disclosed:

Deutsche Bank has received requests for information from certain regulatory authorities who are investigating trading in the foreign exchange market. The Bank is cooperating with those investigations, which are in early stages.⁹⁷

130. Defendant Goldman Sachs' Form 10-Q disclosed:

[Goldman Sachs] Group Inc. and certain of its affiliates are subject to a number of other investigations and reviews by, and in some cases have received subpoenas and requests for documents and information from, various governmental and regulatory bodies and self-regulatory organizations and litigation relating to various matters relating to the firm's businesses and operations, including: . . . trading activities and communications in connection with the establishment of benchmark rates.⁹⁸

⁹⁵ Barclays PLC, Results Announcement, at 120 (Dec. 31, 2013).

⁹⁶ Citigroup Inc., Form 10-Q, at 242 (Nov. 1, 2013).

⁹⁷ Deutsch Bank, 2013 Third Quarter Interim Report, at 108 (Sept. 30, 2013).

⁹⁸ Goldman Sachs Group Inc., Quarterly Report (Form 10-Q), at 108 (Nov. 7, 2013).

131. Defendant HSBC's Interim Management Statement for the third quarter disclosed:

The Financial Conduct Authority is conducting investigations alongside several other agencies in various countries into a number of firms, including HSBC, relating to trading on the foreign exchange market. We are cooperating with the investigations which are at an early stage.⁹⁹

132. Defendant JP Morgan's Form 10-K disclosed:

Foreign Exchange Investigations and Litigation. The Firm has received information requests, document production notices and related inquiries from various U.S. and non-U.S. government authorities regarding the Firm's foreign exchange trading business. These investigations are in the early stages and the Firm is cooperating with the relevant authorities.¹⁰⁰

133. Defendant RBS's third-quarter Interim Management Statement disclosed:

In addition, various governmental and regulatory authorities have commenced investigations into foreign exchange trading activities apparently involving multiple financial institutions. [RBS] has received enquiries from certain of these authorities including the FCA. [RBS] is reviewing communications and procedures relating to certain currency exchange benchmark rates as well as foreign exchange trading activity and is cooperating with these investigations.¹⁰¹

134. Defendant UBS's Third Quarter 2013 Report disclosed:

Following an initial media report in June 2013 of widespread irregularities in the foreign exchange markets, we immediately commenced an internal review of our foreign exchange business. Since then, various authorities reportedly have commenced investigations concerning possible manipulation of foreign exchange markets, including FINMA, WEKO, the DOJ, the CFTC and the FCA. UBS and other financial institutions have received requests from various authorities relating to their foreign exchange businesses, and UBS is cooperating with the authorities. We have taken and will take appropriate action with respect to certain personnel as a result of our review, which is ongoing.¹⁰²

⁹⁹ HSBC Holdings PLC, Interim Management Statement, at 10 (Nov. 4, 2013).

¹⁰⁰ JPMorgan Chase & Co., Annual Report 2013 (Form 10-K), at 326 (Feb. 20, 2014).

¹⁰¹ RBS Group, Interim Management Statement Q3 2013, at 87 (Nov. 1, 2013).

¹⁰² UBS AG, Third Quarter 2013 Report, at 143 (Oct. 29, 2013).

E. Terminations, Suspensions, and Departures of Defendant Employees

135. Highlighting the seriousness of the global investigations into Defendants' conduct regarding FX benchmark rates, including the WM/Reuters Closing Spot Rates, Defendants have terminated, suspended, or put on leave numerous employees with responsibility for their FX operations. Defendants have terminated or suspended over 30 employees, while a number of Defendants have had longtime employees depart amidst the investigations.

Bank of America

136. Bank of America has suspended or terminated at least one employee. In March 2014, Bank of America suspended Joseph Landes, its head of spot FX trading in Europe, the Middle East, and Africa.

Barclays

137. Barclays has suspended or terminated at least six employees and has hired criminal-defense lawyers to represent some of its employees. In November 2013, Barclays suspended six traders as part of its internal inquiry into alleged rigging of the FX market, including its chief currency trader in London. The suspended individuals include London-based Chris Ashton, who oversaw Barclays' voice-spot trading, London-based FX spot trader Mark Clark, Tokyo-based FX spot trader Jack Murray, New York-based FX spot traders Russel Katz and Jerry Urwin, and at least one unknown Barclays' employee. Ashton was part of The Cartel chat room.

BNP Paribas¹⁰³

138. BNP Paribas has suspended or terminated at least one employee. In March 2014, BNP Paribas suspended its head of spot currency trading, Robert de Groot. De Groot was a member of the Bank of England's Chief Dealers' Sub-Group.

Citigroup

139. Citigroup has suspended or terminated at least three employees. Citigroup suspended Anthony John, a sterling trader in London, and Andrew Amantia, a Canadian dollar trader in New York. Citigroup also fired Rohan Ramchandani, who was head of European spot trading, after he was put on leave in October 2013. Ramchandani was part of The Cartel chat room and was a member of the Bank of England's Chief Dealers' Sub-Group. In addition to the aforementioned employees disciplined by the bank, on February 5, 2014, Bloomberg reported that Citigroup's foreign-exchange head Anil Prasad will leave the bank to "pursue other interests."¹⁰⁴ On March 24, 2014, Citigroup named Richard Bibbey as head of global spot FX trading, and merged its voice and electronic trading businesses for currencies. Citigroup did not have a combined global head of spot FX trading previously.

Credit Suisse

140. On September 10, 2013, Todd Sandoz, head of global FX and short-term interest rate trading at Credit Suisse, left the bank after more than 17 years. Based in London, Sandoz took on the role in May 2011 and also became co-head of the new global

¹⁰³ BNP Paribas is not a defendant in this complaint, but is averred to be a participant in the FX Rate Collusion Scheme.

¹⁰⁴ Aberdeen Choudhury, *Citigroup Head of Currencies Prasad to Step Down in March*, BLOOMBERG (Feb. 5, 2014) (available at <http://bloom.bg/1jmunIV>).

currencies. Credit Suisse promoted David Tait, global head of FX trading in London, to succeed Sandoz.

Deutsche Bank

141. Deutsche Bank has suspended or terminated at least five employees. In February 2014, Deutsche Bank fired three New York-based currency traders, Diego Moraiz, Robert Wallden, and Christopher Fahy, and one Argentina-based currency trader, Ezequiel Starobinsky. Moraiz was the head of Deutsche Bank's emerging markets FX trading desk and specialized in trading the Mexican peso. Wallden and Fahy were both directors in the FX trading unit. As noted above, in November 2013, FBI agents questioned Wallden at his New York home about transcripts of an electronic chat in which he boasted about manipulating FX markets. On March 11, 2014, Christian Binaghi, Deutsche Bank's head of Latin America trading, left the firm. Binaghi was a New York-based managing director who oversaw all Latin America trading, including currency, debt, and equity. In addition, on March 31, 2014, London-based Kai Lew, a director of institutional FX sales, was placed on leave following an internal investigation.

Goldman Sachs

142. In February 2014, New-York based Steven Cho, global head of spot and forward foreign exchange trading for G10 currencies at Goldman Sachs, left the bank. Cho was a member of the FX committee sponsored by the Federal Reserve Bank of New York. Leland Lim, another partner in Goldman Sachs' currency-trading business, also left. Lim was co-head of macro trading, which includes interest-rates and currencies, for Asia ex-Japan.

HSBC

143. HSBC has suspended or terminated at least two employees. In January 2014, HSBC suspended Serge Sarramegna, the bank's chief trader for major currencies and head of HSBC's spot FX desk in London, and Edward Pinto, a Scandinavian currency trader.

JP Morgan

144. JP Morgan has suspended or terminated at least one employee. JP Morgan put its chief currency dealer, London-based Richard Usher, on leave in October. Usher was part of The Cartel chat room and was a member of the Bank of England's Chief Dealers' Subgroup. Usher was head of spot G10 currency trading at JP Morgan. He joined JP Morgan from RBS in May 2010.

Morgan Stanley

145. On March 21, 2014, Steve Glynn, co-head of foreign exchange and emerging markets and head of fixed income for Asia at Morgan Stanley, left the bank. Glynn had been at Morgan Stanley for 14 years, initially in London before moving to Hong Kong in 2009. Glynn's role is being taken over by Ben Falloon. Falloon joined Morgan Stanley in 2008 from Credit Suisse.

RBS

146. RBS has suspended or terminated at least three employees. RBS suspended two London-based FX spot traders, Julian Munson and Paul Nash. In addition, RBS suspended a senior spot currency trader based in London, Ian Drysdale.

UBS

147. UBS has suspended or terminated at least nine employees and has hired criminal defense lawyers to represent some of its employees. UBS suspended Roger

Boehler and Niall O’Riordan. Both had been at UBS since the early 1990s. Boehler was the global head of FX trading at UBS’s investment bank, based in Stamford, Connecticut. O’Riordan was the co-global head of FX G10 and emerging market spot trading at UBS, based in Zurich. O’Riordan was part of The Cartel chat room and was a member of the Bank of England’s Chief Dealers’ Subgroup. On March 28, 2014, UBS suspended seven FX traders. They include New-York based emerging markets spot trader Onur Sert, 20-year UBS currency trader Michael Velardi, and five more global traders.

148. In addition, former UBS senior FX trader Matt Gardiner was placed on leave by his current employer, Standard Chartered PLC, where he is the assistant chief dealer in G10 foreign exchange. Gardiner was part of The Cartel chat room. Gardiner worked at UBS for two years prior to joining Standard Chartered and prior to working at UBS, Gardiner worked at Barclays from June 2007 to July 2011, where he was a director in FX spot trading responsible for EUR|USD.

F. The November 2014 Announcements of Agreements and Consent Orders

CFTC and UK-FCA

149. On November 12, 2014, the United States Commodity Futures Trading Commission (“CFTC”) and the United Kingdom Financial Conduct Authority (“UK-FCA”) announced that they had reached consent orders and settlements with six Defendants for their role in the FX Rate Collusion Scheme and In-House FX Manipulation Scheme, that included penalties assessed against the Defendants totaling \$3.2 billion.

150. The CFTC consent orders announced its fines were designed to send a message, in the words of CFTC Chairman Tim Massed, that “wrongdoing and foul play

in the financial markets is unacceptable.”¹⁰⁵ Upon its finding of five Defendants’ “egregious behavior”¹⁰⁶ in manipulating the FX markets for periods between 2009 through 2012, the CFTC negotiated remedial sanctions including fines under the Commodities Exchange Act, as follows: Citigroup (\$310 million);¹⁰⁷ JPMorgan (\$310 million);¹⁰⁸ RBS (\$290 million);¹⁰⁹ UBS (\$290 million)¹¹⁰ and HSBC (\$275 million)¹¹¹ in its enforcement action.

151. The CTFC consent orders described how each of the five Defendants

¹⁰⁵ U.S. CFTC, Statement of Chairman Tim Massad on Today’s Forex Enforcement Announcement (November 12, 2014) (available at <http://www.cftc.gov/PressRoom/PressReleases/massadstatement111214>).

¹⁰⁶ *Id.*

¹⁰⁷ Available at <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfcitibankorder111114.pdf> (“2014 CTFC Citigroup Consent Order”).

¹⁰⁸ Available at <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfjmpmorganorder111114.pdf> (“2014 CTFC JPMorgan Consent Order”).

¹⁰⁹ Available at <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfroyalbankorder111114.pdf> (“2014 CTFC RBS Consent Order”).

¹¹⁰ Available at <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfubsorder111114.pdf> (“2014 CTFC UBS Consent Order”).

¹¹¹ Available at <http://www.cftc.gov/ucm/groups/public/@lrenforcementactions/documents/legalpleading/enfhscorder111114.pdf> (“2014 CTFC HSBC Consent Order”).

sought to benefit its own trading positions or those of certain FX traders at other banks by attempting to manipulate and aiding and abetting certain traders at other banks in their attempts to manipulate certain FX benchmark rates.¹¹²

152. The same day, the UK-FCA noticed settlements with the same five Defendants based on its own investigation of the banks' role in the FX Schemes.¹¹³ The UK-FCA highlighted Defendants' violations of British financial law from January 1, 2008 through October 15, 2013, describing, *inter alia*, practices that were concealed from clients whose interests were subjugated to the banks interest. The practices mirrored U.S. regulators' findings. The individual notices of the settlement announced November 12, 2014 with Defendants JPMorgan,¹¹⁴ RBS,¹¹⁵ UBS,¹¹⁶ and HSBC¹¹⁷ each contained the same language as Citigroup's:

Citi's failure to identify, assess and manage appropriately the risks in its G10 spot FX trading business allowed the following behaviours to occur in that business:

¹¹² 2014 CTFC Citigroup Consent Order at 2; 2014 CTFC JPMorgan Consent Order at 2; 2014 CTFC RBS Consent Order at 2; 2014 CTFC UBS Consent Order at 2; 2014 CTFC HSBC Consent Order at 2.

¹¹³ Press release, *FCA fines five banks £1.1 billion for FX failings and announces industry-wide remediation programme* (available at <http://www.fca.org.uk/news/fca-fines-five-banks-for-fx-failings>) ("2014 UK-FCA Press Release").

¹¹⁴ FCA Final Notice 2014: JPMorgan Chase Bank N.A. (available at <http://www.fca.org.uk/your-fca/documents/final-notices/2014/jpmorgan-chase-bank>) at 15.

¹¹⁵ FCA Final Notice 2014: The Royal Bank of Scotland Plc (available at <http://www.fca.org.uk/your-fca/documents/final-notices/2014/royal-bank-of-scotland>) at 15-16.

¹¹⁶ FCA Final Notice 2014: UBS AG (available at <http://www.fca.org.uk/your-fca/documents/final-notices/2014/ubs-ag>) at 15-16.

¹¹⁷ FCA Final Notice 2014: HSBC Bank Plc (available at <http://www.fca.org.uk/your-fca/documents/final-notices/2014/hsbc-bank-plc>) at 15.

- (1) Attempts to manipulate the WMR and the ECB fix rates in collusion with traders at other firms, for Citi's own benefit and to the potential detriment of certain of its clients and/or other market participants;
- (2) Attempts to trigger clients' stop loss orders for Citi's own benefit and to the potential detriment of those clients and/or other market participants; and
- (3) Inappropriate sharing of confidential information with traders at other firms, including specific client identities and, as part of (1) and (2) above, information about clients' orders.¹¹⁸

The UK-FCA announced the five Defendants had agreed to pay the following financial penalties totaling \$1.76 billion (in U.S. dollars): Citigroup (\$358 million),¹¹⁹ JPMorgan (\$352 million),¹²⁰ RBS (\$344 million),¹²¹ UBS (\$371 million),¹²² and HSBC (\$343 million)¹²³ for their inappropriate FX practices.

153. With the announcement, the UK-FCA provided website links to video presentations showing examples of how each of the five Defendants improperly manipulated the FX market.¹²⁴

¹¹⁸ FCA Final Notice 2014: Citibank N.A. (available at <http://www.fca.org.uk/your-fca/documents/final-notices/2014/citibank-na>) at 15

¹¹⁹ FCA Final Notice 2014: Citibank N.A. at 2.

¹²⁰ FCA Final Notice 2014: JPMorgan Chase Bank N.A. at 2.

¹²¹ FCA Final Notice 2014: The Royal Bank of Scotland Plc at 2.

¹²² FCA Final Notice 2014: UBS AG at 2.

¹²³ FCA Final Notice 2014: HSBC Bank Plc at 2.

¹²⁴ 2014 UK-FCA Press Release, Notes for Editors No. 2 (links as follows: <http://play.buto.tv/Z9kkQ> (Citigroup); <http://play.buto.tv/BjfMx> (JPMorgan); <http://play.buto.tv/N2Nxg> (RBS); <http://play.buto.tv/TLW6R> (UBS AG); <http://play.buto.tv/HcMF6> (HSBC)).

Swiss FINMA

154. Also on November 12, 2014, the Swiss Financial Market Supervisory Authority FINMA ordered Defendant UBS AG to disgorge the equivalent of \$138 million after its own investigation found UBS had participated in the FX Schemes with similar secretive and illegal activity between January 1, 2008 and September 30, 2013:

the bank had – partly also together with third banks – repeatedly and over a long period of time at least attempted to manipulate foreign exchange benchmarks and **acted against the interests of its own clients** owing to the conduct of several employees who had, for instance, engaged in front running and triggered client stop loss orders to the bank’s advantage in order to maximize its profits.¹²⁵

155. FINMA concluded that “Loyalty to the group and mutual trust were unwritten laws and were particularly pronounced” in electronic chat rooms where the FX Rate Collusion Scheme secretly played out.¹²⁶

U.S. Comptroller of the Currency

156. Still another announcement, this one by the U.S. Office of the Comptroller of the Currency (“OCC”) of agreements with three Defendants -- Citigroup, JPMorgan, and BOA -- was made November 12, 2014, citing those three Defendants’ “unsafe and unsound” practices related to their foreign exchange (FX) trading businesses.¹²⁷ In

¹²⁵ Swiss FINMA, *Foreign exchange trading at UBS AG: investigation conducted by FINMA* (“FINMA Report”) (November 12, 2014) (available at <http://www.finma.ch/e/aktuell/Documents/ubs-fx-bericht-20141112-e.pdf>), at 2, 17 (emphasis added).

¹²⁶ FINMA Report at 6 (internal quote marks removed).

¹²⁷ Press Release, *OCC Fines Three Banks \$950 Million for FX Trading Improprieties*, (November 12, 2014) (available at <http://www.occ.treas.gov/news-issuances/news-releases/2014/nr-occ-2014-157.html>)

announcing a total of \$950 million in civil penalties against the three Defendants, Comptroller of the Currency Thomas J. Curry made clear,

These enforcement actions were taken because several large banks permitted an environment to develop in which unscrupulous traders discussed manipulating foreign exchange markets. Our action today, and those of our fellow regulatory agencies here in the United States, in the United Kingdom and in Europe, sends a very strong signal that such misconduct will not be tolerated.¹²⁸

157. The OCC announced that as a result of its FX manipulation investigation of the three Defendants' misconduct between 2008 through 2013, it levied these penalties: Citigroup (\$350 million);¹²⁹ JPMorgan (\$350 million);¹³⁰ and BOA (\$250 million).¹³¹

G. The May 20, 2015 Announcement of Plea Agreements and Consent Orders

U.S. Department of Justice and the Federal Reserve Board

158. On May 20, 2015 the United States Department of Justice ("DOJ") and the Board of Governors of the Federal Reserve System ("Federal Reserve") announced that plea agreements and consent orders had been reached and \$4.57 billion in record penalties would be levied against six Defendant banking groups to settle criminal and

¹²⁸ *Id.*

¹²⁹ Consent Orders available at <http://www.occ.treas.gov/news-issuances/news-releases/2014/nr-occ-2014-157c.pdf> and <http://www.occ.treas.gov/news-issuances/news-releases/2014/nr-occ-2014-157d.pdf>

¹³⁰ Consent Orders available at <http://www.occ.treas.gov/news-issuances/news-releases/2014/nr-occ-2014-157f.pdf> and <http://www.occ.treas.gov/news-issuances/news-releases/2014/nr-occ-2014-157e.pdf>

¹³¹ Consent Orders available at <http://www.occ.treas.gov/news-issuances/news-releases/2014/nr-occ-2014-157b.pdf> and <http://www.occ.treas.gov/news-issuances/news-releases/2014/nr-occ-2014-157a.pdf>

regulatory investigations into these banks' illegal and improper collusion to manipulate the FX Spot Market benchmark rates, including the WM/Reuters Closing Spot rate and the European Central Bank ("ECB") FX rate.¹³²

159. The DOJ's plea agreements to settle criminal charges included recommended fines against the following Defendants who admitted to FX benchmark rate market collusion for various periods between December 2007 and at least January 2013, among other FX-related manipulation: Citigroup (\$925 million);¹³³ Barclays (\$650 million);¹³⁴ JPMorgan (\$550 million);¹³⁵ UBS (\$203 million);¹³⁶ and RBS (\$395 million).¹³⁷

160. U.S. Attorney General Loretta Lynch announced the fines and criminal plea agreements with DOJ against the five Defendants, saying they had "for years participated in a brazen display of collusion and foreign exchange rate market manipulation," noting that "these unprecedented figures appropriately reflect the

¹³² Press Release, *Five Major Banks Agree to Parent-Level Guilty Pleas* (May 20, 2015) (available at <http://www.justice.gov/opa/pr/five-major-banks-agree-parent-level-guilty-pleas>); Press Release (May 20, 2015) (available at <http://www.federalreserve.gov/newsevents/press/enforcement/20150520a.htm>).

¹³³ Available at <http://www.justice.gov/file/440486/download> ("2015 Citigroup Plea Agreement").

¹³⁴ Available at <http://www.justice.gov/file/440481/download> ("2015 Barclays Plea Agreement").

¹³⁵ Available at <http://www.justice.gov/file/440491/download> ("2015 JPMorgan Plea Agreement").

¹³⁶ Available at <http://www.justice.gov/file/440521/download> ("2015 UBS Plea Agreement").

¹³⁷ Available at <http://www.justice.gov/file/440496/download> ("2015 RSB Plea Agreement").

conspiracy's breathtaking flagrancy, its systemic reach and its significant impact.”¹³⁸ In their plea agreements, Citicorp, Barclays, JPMorgan and RBS – all Defendants here – admitted to violating the federal antitrust laws and acknowledged “their role in this conspiracy.”¹³⁹ In addition, UBS – another Defendant in this case –admitted to “fraudulent and deceptive currency trading and sales practices related to foreign exchange markets,” and “collusion with other participants in the FX markets.”¹⁴⁰

161. The Federal Reserve called the penalties it announced against six Defendants, “among the largest ever assessed by the Federal Reserve,” in response to the banks’ “unsafe and unsound practices in the foreign exchange markets,” which included failures “to detect and address illegal agreements among traders to manipulate benchmark currency prices.”¹⁴¹ The fines the Federal Reserve announced that day against these six Defendants for their “unsafe and unsound practices” between 2008 and 2013 were: Citigroup (\$342 million);¹⁴² Barclays (\$342 million);¹⁴³ JPMorgan (\$342 million);¹⁴⁴ RBS (\$272 million);¹⁴⁵ UBS (\$342 million);¹⁴⁶ and BOA (\$205 million).¹⁴⁷

¹³⁸ Prepared Remarks, *Attorney General Lynch Delivers Remarks at a Press Conference on Foreign Exchange Spot Market Manipulation* (May 20, 2015) (available at <http://www.justice.gov/opa/speech/attorney-general-lynch-delivers-remarks-press-conference-foreign-exchange-spot-market>).

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ Press Release (May 20, 2015) (available at: <http://www.federalreserve.gov/newsevents/press/enforcement/20150520a.htm>).

¹⁴² Consent Order available at: <http://www.federalreserve.gov/newsevents/press/enforcement/enf20150520a5.pdf> (“2015 Citigroup Consent Order”).

162. Six Defendant banks signed consent orders describing their “unsafe and unsound banking practices” related to their FX Transactions. Four of the banks signed orders citing a failure to provide information to FX customers regarding price quotes and how customer FX orders were filled, i.e. concealment. As described in the Barclays consent order issued by the Federal Reserve:

D. Barclays’ deficient policies and procedures prevented Barclays from detecting and addressing unsafe and unsound conduct by the Bank’s and the Branch’s FX sales personnel regarding:

- (i.) the provision of information to customers regarding price quotes; and
- (ii.) the provision of information to customers about how a customer’s FX order is filled;

E. As a result of deficient policies and procedures described above, the Bank and the Branch engaged in unsafe and unsound banking practices.¹⁴⁸

¹⁴³ Consent Order available at:

<http://www.federalreserve.gov/newsevents/press/enforcement/enf20150520a3.pdf> (“2015 Barclays Consent Order”).

¹⁴⁴ Consent Order available at:

<http://www.federalreserve.gov/newsevents/press/enforcement/enf20150520a2.pdf> (“2015 JPMorgan Consent Order”).

¹⁴⁵ Consent Order available at:

<http://www.federalreserve.gov/newsevents/press/enforcement/enf20150520a4.pdf> (“2015 RBS Consent Order”).

¹⁴⁶ Consent Order available at:

<http://www.federalreserve.gov/newsevents/press/enforcement/enf20150520a6.pdf> (“2015 UBS Consent Order”).

¹⁴⁷ Consent Order available at:

<http://www.federalreserve.gov/newsevents/press/enforcement/enf20150520a1.pdf> (“2015 BOA Consent Order”).

¹⁴⁸ 2015 Barclays Consent Order, p. 5. See also 2015 Citigroup Consent Order, p. 5; 2015 JPMorgan Consent Order, p. 4; 2015 UBS Consent Order, p. 5.

163. In those consent orders, the Federal Reserve requires all six Defendants to establish “comprehensive policies and procedures to ensure that sales personnel and traders do not communicate inaccurate or misleading information to customers regarding: (i) the amount of markup, commission, or other service charge applied to customer orders by the firm; and (ii) how orders are executed by the firm....”¹⁴⁹

N.Y. Department of Financial Services, CFTC, and UK-FCA

164. Also on May 20, 2015, three other government entities – the New York State Department of Financial Services (“DFS”), the U.S. Commodity Futures Trading Commission, and the UK-FCA – announced they had reached consent orders with Barclays, to settle their investigations into Barclays Bank PLC and its role in manipulating the FX market over similar periods¹⁵⁰ (together with the DOJ plea agreements and the Federal Reserve consent orders the “May 20, 2015 Agreements”). Barclays agreed to additional penalties totaling \$1.32 billion with DFS and CFTC.¹⁵¹

¹⁴⁹ 2015 Barclays Consent Order, p. 7; 2015 BOA Consent Order, p. 7; 2015 Citigroup Consent Order, p. 8; 2015 JPMorgan Consent Order, p. 8; 2015 RBS Consent Order, p. 7; 2015 UBS Consent Order, p. 8.

¹⁵⁰ Press Release, *NYDFS Announces Barclays to Pay \$2.4 Billion, Terminate Employees for Conspiring to Manipulate Spot FX Trading Market* (May 20, 2015) (available at: <http://www.dfs.ny.gov/about/press/pr1505201.htm>); Press Release 7181-15, *Barclays to Pay \$400 Million Penalty to Settle CFTC Charges of Attempted Manipulation and False Reporting of Foreign Exchange Benchmark Rates* (May 20, 2015) (available at: <http://www.cftc.gov/PressRoom/PressReleases/pr7181-15>); Press Release, *FCA Fines Barclays for £284,432,000 for Forex Failings* (May 20, 2015) (available at: <http://www.fca.org.uk/news/press-releases/fca-fines-barclays-for-forex-failings#>).

¹⁵¹ This includes the £284,432,000 United Kingdom penalty converted to U.S. dollars. <http://www.dfs.ny.gov/about/ea/ea150520.pdf> (DFS); <http://www.fca.org.uk/your-fca/documents/final-notices/2015/barclays-bank-plc> (UK-FCA).

165. New York State Department of Financial Services Superintendent

Benjamin M. Lawsky said in announcing his agency's consent order with Barclays: "Put simply, Barclays employees helped rig the foreign exchange market. They engaged in a brazen 'heads I win, tails you lose' scheme to rip off their clients. While today's action concerns misconduct in spot trading, there is additional work ahead."¹⁵²

166. As part of the May 20, 2015 Agreements, certain of the six Defendant banks agreed to terminate certain employees and to monitoring by regulators.

In-House FX Manipulation Schemes

167. In the May 20, 2015 Agreements, five Defendant banks admitted not only that they manipulated the FX Spot Market by colluding to move the fixing rates, but also that they took individual actions to benefit themselves at the expense of their FX clients while benefiting each Defendant bank. This manipulation is independent of the FX Rate Collusion Scheme.

168. For example, the criminal plea agreements between the DOJ and Defendants Barclays, Citigroup, JPMorgan, RBS and UBS contained admissions of secret manipulation of FX Transactions by each bank to increase the bank's profits at the expense of its FX clients. Each bank concealed these practices (collectively the "In-House FX Manipulation Schemes") from its clients. These techniques are described in the Citigroup plea agreement as follows:

We added markup to price quotes using hand signals and/or other internal arrangements or communications. Specifically, when obtaining price quotes for bids or offers from the Firm, certain clients requested to be placed on open telephone lines, meaning the client could hear pricing not only from a salesperson,

¹⁵² Press Release, *NYDFS Announces Barclays to Pay \$2.4 Billion, Terminate Employees for Conspiring to Manipulate Spot FX Trading Market* (May 20, 2015) (available at <http://www.dfs.ny.gov/about/press/pr1505201.htm>).

but also from the trader who would be executing the client's order. In certain instances, certain of our salespeople used hand signals to indicate to the trader to add markup to the price being quoted to the client on the open telephone line, so as to avoid informing the client listening on the phone of the markup and/or the amount of the markup. For example, prior to agreement between the client and the Firm to transact for the purchase of €100, a salesperson would, in certain instances, indicate with hand signals that the trader should add two pips of markup in providing a specific price to the client (*e.g.*, a EURUSD rate of 1.1202, rather than 1.1200) in order to earn the Firm markup in connection with the prospective transaction.

We have, without informing clients, worked limit orders at levels (i.e., prices) better than the limit order price so that we would earn a spread or markup in connection with our execution of such orders. This practice could have impacted clients in the following ways: (1) clients' limit orders would be filled at a time later than when the Firm could have obtained currency in the market at the limit orders' prices, and (2) clients' limit orders would not be filled at all, even though the Firm had or could have obtained currency in the market at the limit orders' prices. For example, if we accepted an order to purchase €100 at a limit of 1.1200 EURUSD, we might choose to try to purchase the currency at a EURUSD rate of 1.1199 or better so that, when we sought in turn to fill the client's order at the order price (*i.e.*, 1.1200), we would make a spread or markup of 1 pip or better on the transaction. If the Firm were unable to obtain the currency at the 1.1199 price, the clients' order may not be filled as a result of our choice to make this spread or markup.

We made decisions not to fill clients' limit orders at all, or to fill them only in part, in order to profit from a spread or markup in connection with our execution of such orders. For example, if we accepted a limit order to purchase €100 at a EURUSD rate of 1.1200, we would in certain instances only partially fill the order (*e.g.*, €70) even when we had obtained (or might have been able to obtain) the full €100 at a EURUSD rate of 1.1200 or better in the marketplace. We did so because of other anticipated client demand, liquidity, a decision by the Firm to keep inventory at a more advantageous price to the Firm, or for other reasons. In doing so, we did not inform our clients as to our reasons for not filling the entirety of their orders.¹⁵³

¹⁵³ 2015 Citigroup Plea Agreement, Appendix B, Disclosure Notice (emphasis added).

169. Similar admissions of these In-House FX Manipulation Schemes appear in the May 20, 2015 plea agreements reached between Barclays, JPMorgan, RBS and UBS and the DOJ announced May 20, 2015.¹⁵⁴

170. On information and belief, each of these five Defendant banks relied upon these In-House FX Manipulation Schemes as part of a secret scheme to reap improper profits on FX Transactions from ERISA Plan clients without revealing these practices during the Class Period.

V. THE ERISA TRUSTS, BENEFIT PLANS AND ERISA CLAIMS

171. ERISA “employee benefit plans” include “employee pension benefit plans” and “employee welfare benefit plans” 29 U.S.C. § 1002(3). A welfare plan is typically the vehicle through which an employer provides health insurance to its employees.

172. ERISA benefit plans have, especially over the last decade, found it necessary and prudent to expand their investments to include foreign securities. ERISA-covered plans regularly purchase and sell foreign securities in order to increase diversification and take advantage of opportunities for higher returns. ERISA plans that invest in foreign securities receive principal, dividends, interest, tax reclaims, and other payments in foreign currencies, or make other investments such as real estate that require the exchange of foreign currency into and from U.S. Dollars. The purchase and sale of

¹⁵⁴ 2015 Barclays Plea Agreement, Appendix C. Disclosure Notice; 2015 JPMorgan Plea Agreement, Appendix B, Disclosure Notice; 2015 RBS Plea Agreement, Appendix B, Disclosure Notice (only as to paragraph 2); and 2015 UBS Plea Agreement, Exhibit 1, Factual Basis for Breach, at 6-7.

currencies and use of FX Instruments generally is vital to an ERISA benefit Plan's participation in the international markets, and to the management of currency risk.

173. During the Class Period, the Plans used individual investment managers to invest Plan assets for the exclusive purpose of providing plan participants and beneficiaries pension and health benefits. Investment managers authorized FX Transactions with Plan assets when their investment strategies for a Plan required the exchange of one currency for another, or the use of FX Instruments generally.

174. During the Class Period, many investment managers of ERISA Plan assets arranged with banking institutions to conduct FX Transactions associated with these ERISA assets. Some of the banking institutions were custodians of the Plan's assets. Those banking institutions often included Defendants.

175. Often a Plan or its investment manager buys, sells, or holds American Depositary Receipts ("ADRs"). ADRs represent interests in foreign securities of a non-US company. ADRs are issued by a bank and trade in U.S. financial markets.

176. Sponsors of ADRs include Defendants Citigroup, Deutsche Bank, and JP Morgan. Each of the Bridgestone and the two Caterpillar plans and their associated Trusts invested in ADRs sponsored by these Defendants. A list of ADRs sponsored by Defendants and held as investments by the plans and their associated trusts is attached as Appendix 4.

177. Investing in ADRs necessitates the execution of FX Transactions, for example when the ADR underlying foreign security declares a dividend or makes an interest payment in non-U.S. currency. Defendants can execute these FX Transactions with respect to an investment in an ADR.

178. Defendants Citigroup, Deutsche Bank and JP Morgan engaged in FX Rate Collusion Scheme and the In-House FX Manipulation Schemes when pricing ADRs, including ADRs sponsored by them.

179. Certain banking entities served as Plan investment managers for foreign assets of ERISA Plans, typically in common and collective trust funds and separately managed accounts. As investment managers of foreign assets, they are prohibited by ERISA from executing FX Transactions involving the ERISA assets they manage. These FX Transactions must be conducted by an entity other than the investment manager or the investment manager's affiliate.¹⁵⁵

A. The Bridgestone Americas Salaried Employees Retirement Plan

180. During the Class Period, the Bridgestone Master Pension Trust managed the combined investment assets of several employee pension benefit plans sponsored by entities owned or controlled by Bridgestone Americas, Inc., based in Nashville, Tennessee, including the Bridgestone Americas Salaried Employees Retirement Plan ("Bridgestone Retirement Plan"). These participating employee benefit plans are qualified plans under ERISA, 29 U.S.C. §1002(2)(A).

181. The assets of the Bridgestone Master Pension Trust are ERISA assets.

182. During the Class Period, investment managers of the assets of the Bridgestone Master Pension Trust arranged with banks to conduct FX Transactions, each of which involved ERISA assets of the Bridgestone Retirement Plan. For instance, Defendants Barclays, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC,

¹⁵⁵ A bank that provides investment management services for ERISA Plan assets is *per se* prohibited from performing FX Transactions relating to such investments. 29 U.S.C. §1106.

JPMorgan, Morgan Stanley, and UBS executed FX Transactions with the assets of the Bridgestone Master Pension Trust and its constituent ERISA employee benefit plans.

Appendix #1 contains examples of FX Transactions that were provided by these nine Defendants to the Bridgestone Master Pension Trust during the Class Period.

183. During the Class Period, certain Defendants also served as investment managers for foreign assets of the Bridgestone Master Pension Trust. These international investment assets required the execution of FX Transactions during the Class Period. These Defendant investment managers include the following:

Bridgestone Master Pension Trust		
Investment Fund Sponsor	Investment Fund Name	Year
Barclays Global Investors	BGI INTERNATIONAL ALPHA TILTS FD	2008
HSBC Global Asset Management	HGIF GEM BD CL AD FD	2008
HSBC Global Asset Management	HGIF GIF GL EM BD ZD CLASS	2008-2009
HSBC Global Asset Management	HGIF NEW WORLD CL Z FD	2008-2009
HSBC Global Asset Management	HGIF NEW WORLD INC CL M1D FD	2008-2012
HSBC Global Asset Management	HSBC GIF NEW WORLD BRIDGESTONE FD	2008-2009
HSBC Global Asset Management	HSBC GIF NEW WORLD INCOME L FD	2011-2012
HSBC Global Asset Management	HSBC GIF NEW WORLD INCOME L1D FD	2008-2012
HSBC Global Asset Management	HSBC GIF NEW WORLD M1C FD	2008
HSBC Global Asset Management	HSBC GIF-GL EMER MKT BD A DIS FD	2009-2012
HSBC Global Asset Management	HSBC GIF-GL EMER MKT BD-AI-S FD	2008-2012
HSBC Global Asset Management	HSBC GLOBAL EMER MKT LOC DEBT Z FD	2008-2010
HSBC Global Asset Management	HSBC GLOBAL INV NEW WORLD M1C FD	2011-2012

JP Morgan Chase	JPMCB Global Focus Fund	2008-2012
JP Morgan Chase	JPMC Intl Real Estate FD	2011-2013

184. These foreign investments managed by these Defendants required the execution of FX Transactions during the Class Period.

185. Absent engaging in a transaction prohibited by ERISA 29 U.S.C. 1106, by executing FX Transactions with ERISA assets they manage, these Defendant investment managers likely would have had other banking entities, including other Defendants, conduct FX Transactions associated with ERISA Plan foreign investments they managed. If Defendants priced the FX Transactions at manipulated fixing rates, these transactions violated ERISA's fiduciary duties and *per se* prohibitions on prohibited transactions.

186. At the time that these Defendants conducted or authorized FX Transactions for the Bridgestone Master Pension Trust assets whose price was based on fixing rates, such as the WM/Reuters Closing Spot Rate, that were manipulated, each Defendant participated in the FX Rate Collusion Scheme. Defendants used the FX Rate Collusion Scheme to reap profits for themselves at the expense of the Bridgestone Master Pension Trust, the Bridgestone Retirement Plan, and Plaintiff Lucas.

187. Also, Defendants who engaged in the In-House FX Manipulation Schemes when executing FX Transactions for the assets of the Bridgestone Master Pension Trust, reaped profits at the expense of the Trust, its constituent ERISA employee benefit plans, and Plaintiff Lucas.

188. Defendants concealed from the Bridgestone Master Pension Trust, the Bridgestone Retirement Plan, and Plaintiff Lucas that it (and, as applicable, other

Defendants) would illegally profit from the two Schemes at the expense of the Trust, Plan, and Plaintiff Lucas.

B. The Caterpillar Inc. Retirement Income Plan

189. During the Class Period, the Caterpillar Retirement Master Trust managed the combined investment assets of several employee pension benefit plans sponsored by entities that were owned or controlled by Caterpillar, Inc., of Peoria, Illinois, including the Caterpillar Inc. Retirement Income Plan (“Caterpillar Retirement Plan”). These participating employee benefit plans are qualified plans under ERISA, 29 U.S.C. §1002(2)(A).

190. The assets of the Caterpillar Retirement Master Trust are ERISA assets.

191. During the Class Period, investment managers of the Caterpillar Retirement Master Trust’s assets arranged with banks to conduct FX Transactions, each of which involved ERISA assets of the Caterpillar Retirement Plan. For instance, Defendants Deutsche Bank, RBS and UBS executed FX Transactions with the assets of the Caterpillar Retirement Master Trust and its constituent ERISA employee benefit plans. Appendix #2 contains examples of such transactions with assets of the Caterpillar Retirement Master Trust during the Class Period by the Defendants.

192. During the Class Period, Defendant JPMorgan Chase also served as investment manager for common and collective trusts which held foreign securities which were assets of the Caterpillar Retirement Master Trust. The common and collective trusts required FX Transactions. They include the following:

Caterpillar Retirement Master Trust		
Investment Fund Sponsor	Investment Fund	Year
JPMorgan Chase	JPMCB Emerging Markets Opportunity Fund	2009-2013
JPMorgan Chase	JPMCB International Bond Fund	2009-2013

193. These foreign investments managed by these Defendants required the execution of FX Transactions during the Class Period.

194. Absent engaging in a transaction prohibited by ERISA 29 U.S.C. 1106, by executing FX Transactions with ERISA assets they manage, these Defendant investment managers likely would have had other banking entities, including other Defendants, conduct FX Transactions associated with ERISA Plan foreign investments they managed. If Defendants priced the FX Transactions at manipulated fixing rates, these transactions violated ERISA's fiduciary duties and *per se* prohibitions on prohibited transactions.

195. At the time that these Defendants conducted or authorized FX Transactions for the Caterpillar Retirement Master Trust assets whose price was based on fixing rates, such as the WM/Reuters Closing Spot Rate, that were manipulated, each Defendant participated in the FX Rate Collusion Scheme. Defendants used the FX Rate Collusion Scheme to reap profits for themselves at the expense of the Caterpillar Retirement Master Trust, Caterpillar Retirement Plan, and Plaintiff Allen.

196. Also, Defendants who engaged in the In-House FX Manipulation Schemes when executing FX Transactions for the assets of the Caterpillar Retirement Master Trust, reaped profits at the expense of the Caterpillar Retirement Master Trust, Caterpillar Retirement Plan, and Plaintiff Allen.

197. Defendants concealed from the Caterpillar Retirement Master Trust, the Caterpillar Retirement Plan, and Plaintiff Allen that it (and, as applicable, other Defendants) would illegally profit from the two Schemes at the expense of the Trust, the Plan, and Plaintiff Allen.

C. The Caterpillar Inc. Retiree Benefit Program

198. During the Class Period, the Caterpillar Insurance Master Trust managed the combined investment assets of several employee welfare benefit plans sponsored by entities owned or controlled by Caterpillar, Inc., based in Peoria, Illinois, including Caterpillar Inc. Retiree Benefit Program (“Caterpillar Health Plan”). These participating employee welfare benefit plans are qualified plans under ERISA, 29 U.S.C. §1002(2)(A).

199. The assets of the Caterpillar Insurance Master Trust are ERISA assets.

200. During the Class Period, investment managers of assets of the Caterpillar Insurance Master Trust arranged for banks to conduct FX Transactions, each of which involved ERISA assets of the Caterpillar Health Plan. These included investment managers using forward contracts to manage foreign exchange rate risks associated with certain investments.¹⁵⁶

201. Defendants Bank of America, RBS, and UBS executed FX Transactions with the assets of the Caterpillar Insurance Master Trust and its constituent ERISA employee benefit plans. Appendix #3 contains examples of FX transactions that were provided by these Defendants to the Caterpillar Insurance Master Trust during the Class Period.

¹⁵⁶ 2009 U.S. Dept. of Treasury, Internal Revenue Service Form 5500, Caterpillar Inc. Retiree Benefit Program, p. 12.

202. At the time that these Defendants executed FX Transactions for the Caterpillar Insurance Master Trust based on manipulated fixing rates such as the WM/Reuters Closing Spot Rate, that were manipulated, each Defendant participated in the FX Rate Collusion Scheme. Defendants used the FX Rate Collusion Scheme to reap profits for themselves at the expense of the Caterpillar Insurance Master Trust, Caterpillar Health Plan, and Plaintiff Allen.

203. Also, Defendants who engaged in the In-House FX Manipulation Schemes when executing FX Transactions for the assets of the Caterpillar Insurance Master Trust profited at the expense of the Caterpillar Insurance Master Trust, its constituent ERISA employee benefit plans, and Plaintiff Allen.

204. Defendants concealed from the Caterpillar Insurance Master Trust, the Caterpillar Health Plan, and Plaintiff Allen that they (and, as applicable, other Defendants) would profit illegally from the two schemes at the expense of the Trust, the Plan, and Plaintiff Allen.

D. Defendants' Fiduciary Status and ERISA Violations

205. Every ERISA plan must have one or more named fiduciaries to administer and manage the plan. ERISA treats as fiduciaries not only persons explicitly named as fiduciaries, but also any other person who in fact performs fiduciary functions.

206. Specifically, under ERISA a person is a fiduciary “to the extent … he exercises any discretionary authority or discretionary control respecting management of such plan or *exercises any authority or control respecting management or disposition of its assets…*” 29 U.S.C. §1002(21)(A)(i) (emphasis added). Thus, an entity is an ERISA fiduciary if it exercises discretionary authority or control in managing the plan, or, if it exercises any authority or control (discretionary or not) respecting management or

disposition of plan assets. Under ERISA, one can be a fiduciary whether or not one would qualify as an agent under the common law.

207. An ERISA fiduciary is required to “discharge his duties with respect to a plan solely in the interest of the participants and beneficiaries and … for the exclusive purpose of … providing benefits to participants and beneficiaries and … defraying the reasonable expenses of administering the plan” ERISA, 29 U.S.C. §1104(a)(1)(A)(i), (ii). In common parlance, ERISA fiduciaries owe a duty of loyalty.

208. Defendants were fiduciaries under ERISA to the extent they exercise any authority or control respecting management or disposition of the Plans’ assets. In addition, Defendants were fiduciaries under ERISA to the extent they exercised any discretionary authority or discretionary control respecting management of the Plans or the Plans’ assets.

209. To the extent Defendants exercised any authority or control respecting management or disposition of the Plans’ assets or exercise any discretionary authority or discretionary control respecting management of the Plans or the Plans’ assets in executing foreign exchange transactions, they acted in a fiduciary capacity and were required to satisfy ERISA’s fiduciary conduct requirements when doing so.

210. In addition, Defendants were fiduciaries under ERISA to the extent they helped the Plans manage FX Transactions for a fee or other compensation, direct or indirect, with respect to any moneys or other property of each plan, or had any authority or responsibility to do so.

211. Here, Defendants exercised discretionary authority and control over plan assets and management. Through the FX Rate Collusion Scheme and the In-House FX

Manipulation Scheme, Defendants exercised discretion as to the rates at which they executed FX Transactions on behalf of the ERISA Plans, when those rates were based on or near the manipulated FX fixing rates such as the WM/Reuters Closing Spot Rate.

212. Further, the Defendants relied on the two Schemes to set their own fees or compensation for executing FX Transactions for the ERISA Plans. In other words, Defendants' fees or compensation for executing FX transactions were variable depending on factors within Defendants' influence and control, which Defendants manipulated to increase their own fees or compensation. Each Defendant exercised this discretion regardless of whether the Defendant that provided the FX Transaction service was a Plan's custodian bank.

213. Separately, an ERISA violation occurred each time a Defendant itself served as a Plan investment manager and arranged FX Transactions for ERISA Plan assets with a different Defendant while participating in the FX Rate Collusion Scheme.¹⁵⁷ In doing so, the Defendant violated ERISA when the rate was based on manipulated fixing rates such as the WM/Reuters Closing Spot Rate.

214. Defendants concealed the FX Rate Collusion Scheme. As a result, any agreement between a Defendant and a Plan that permitted FX Transactions to be priced at or around fixing rates such as the WM/Reuters Closing Spot Rates was not on terms that could have been achieved in an arm's length transaction.

215. Defendants also concealed the In-House FX Manipulation Scheme. As a result, any agreement between a Defendant and a Plan that permitted any Defendant to

¹⁵⁷ For instance, certain Defendants offered common collective trusts as investment vehicles to ERISA Plans, including the Caterpillar and Bridgestone Plans during the class period. These investments are ERISA Plan assets and subject to ERISA fiduciary duties.

execute any FX Transactions when the Defendant used the In-House FX Manipulation was not on terms that could have been achieved in an arm's length transaction.

VI. PLAINTIFFS ARE ENTITLED TO ERISA'S FRAUD OR CONCEALMENT LIMITATIONS PERIOD

216. ERISA's statute of limitations provision for fiduciary breach claims provides that "in the case of fraud or concealment, [an] action may be commenced not later than six years after the date of discovery of such breach or violation." 29 U.S.C. §1113.

217. Defendants' two FX Schemes, as described above, constitute intentional concealment sufficient for ERISA's fraud or concealment limitations period. Plaintiffs were not aware of the existence of either of the two Schemes until after Bloomberg published an article on June 12, 2013.

218. During the Class Period, each Defendant actively and effectively concealed its participation in the manipulation of the FX Spot Market through the FX Rate Collusion Scheme from Plaintiffs and other members of the Class.

219. The unlawful FX Rate Collusion Scheme was self-concealing by its very nature. Each Defendant conspired to manipulate the FX Spot Market to the benefit of other Defendants and to the detriment of Plaintiffs and other members of the Class. Defendants conspired to keep their collusive and manipulative conduct secret. As a result, Plaintiffs could not, and did not, discover that they had suffered injury prior to Bloomberg's June 12, 2013 article.

220. Some of the highest-ranking traders employed by the Defendants controlled the chat rooms in question, and Defendants strictly limited access to the chat

rooms. The substance of the conversations that occurred in these chat rooms was unknown to Plaintiffs until June 12, 2013, at the earliest.

221. When the first Defendant (Citigroup) announced its decision to bar traders from accessing chat rooms, it offered a pretextual reason for the ban, describing the decision as a “sign of concern by banks over online security issues.”¹⁵⁸

222. Each Defendant knew that it could not subject its manipulative and collusive conduct as part of the FX Rate Collusion Scheme to public scrutiny or to its ERISA clients. In addition, each Defendant actively and jointly concealed its manipulative and collusive conduct. For instance, each Defendant agreed with the other bank FX manipulators not to discuss publicly or otherwise reveal the nature and substance of the acts and communications in furtherance of the collusive agreements with each other.

223. Each Defendant’s success in concealing the FX rate manipulation and their participation in the manipulation was facilitated by control over the global foreign currency markets by the large banks that participated in the Schemes. Defendants wield substantial power over market participants. Market participants who might suggest Defendants have engaged in collusive behavior would limit their access to FX markets. It is noteworthy that the first reports of the FX manipulation came from bankers themselves, not market participants.

224. To Plaintiffs’ knowledge, the first report of the possibility of an FX rate collusion scheme was published by Bloomberg on June 12, 2013.¹⁵⁹ That report,

¹⁵⁸ Alice Ross, *Citi Removes Forex Traders from Bloomberg internal chat groups*, FINANCIAL TIMES (May 16, 2013) (available at <http://on.ft.com/1m4mj1g>).

however, was premised on “five dealers with knowledge of the practice” who were not identified in the article.¹⁶⁰ The dealers specifically “declined to identify which banks engaged in manipulative practices.”¹⁶¹

225. After the Bloomberg article indicated possible manipulation in the FX Spot Market, no Defendant addressed the allegations. It was still later, October 2013, that the first traders alleged to be involved in the FX-rigging were put on leave.

226. The Bloomberg article did not identify the currency pairs involved in the manipulation of the WM/Reuters Closing Spot Rates or the parties to the rigging, and gave little detail as to how the rigging occurred.

227. The first class action complaint, alleging antitrust claims, and filed in the Southern District of New York, on November 1, 2013, after the FX traders were first put on leave.

228. Similarly during the Class Period, each Defendant actively and effectively concealed its use of the In-House FX Manipulation Scheme from Plaintiffs and members of the Class for whom each Defendant conducted FX Transactions. The In-House FX Manipulation Scheme came to light after the FX Rate Collusion Scheme was revealed.

229. None of the facts or information available to Plaintiffs, if investigated with reasonable diligence, could or would have led to the discovery of the FX Rate Collusion Scheme or the In-House FX Manipulation Scheme alleged in this Complaint.

¹⁵⁹ Liam Vaughan, Gavin Finch and Ambereen Choudhury, *Traders Said to Rig Currency Rates to Profit Off Clients*, BLOOMBERG (June 11, 2013) (available at <http://bloom.bg/1qGQ3oy>).

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

230. As a result, Plaintiffs were prevented from learning of the facts needed to commence suit against any Defendant for the two manipulative Schemes alleged in this Complaint until Defendants and regulators publicly acknowledged the investigations.

231. There are many additional reasons why these facts could not have been known. FX Transactions occur primarily in the private, over the counter (“OTC”) market, and each Defendant’s transactions and FX strategies are not public information. Each Defendant does not publish information concerning particular FX Transaction entities, including FX Transactions between dealer entities. Defendants, acting as executing dealers, also discouraged brokers from revealing or otherwise identifying them as counterparties on the brokers’ customers’ transactions, in order to conceal the counterparties on those transactions. Reasonable due diligence could not have uncovered each Defendant’s manipulation of the WM/Reuters FX Closing Spot Rates or other FX fixing rates, or of the In-House FX Manipulation Schemes because the non-exchange, closed, and private nature of the trades helped to conceal each Defendant’s conduct.

232. The facts that Plaintiffs needed draft a complaint that satisfied applicable pleading standards remained within the exclusive control of Defendants and regulatory authorities no earlier than the date of the first report of the possibility of an FX rate collusion scheme by Bloomberg on June 12, 2013.

233. Each Defendant, because it concealed its participation in the FX Rate Collusion Scheme and use of In-House FX Manipulation Scheme, and its reaping of secret profits at its clients’ expense, effectively precluded its ERISA FX clients from discovering that Defendants were manipulating the FX rates they charged the ERISA clients.

234. Plaintiffs expects to uncover further evidence of Defendants' concealment as discovery proceeds.

VII. CLASS ALLEGATIONS

235. **Class Definition.** Plaintiffs brings this action as a class action pursuant to Federal Rule of Civil Procedure 23(a), (b)(1), (b)(2), and (b)(3) on behalf of the following class:

The Class comprises all participants, beneficiaries, and named fiduciaries of qualified ERISA plans for whom a Defendant (or their affiliates or predecessors in interest) (1) provided foreign currency exchange transactional services (including foreign currency transactional services provided to collective investment funds or separately managed accounts that held the Plans' assets) or (2) exercised any discretionary authority or discretionary control respecting management of such ERISA plan or exercised any authority or control respecting management or disposition of its assets by which a Defendant authorized or permitted the execution of any foreign currency exchange transactional services involving that plan's assets by any banking entity.

Excluded from the class are any officers, directors, affiliates, legal representatives, heirs, successors, subsidiaries, and/or assigns of the Defendants or any of their respective predecessors in interest or any entity in which any Defendant or any of their respective predecessors in interest have a controlling interest.

Class treatment is appropriate in this case because it would promote judicial economy by adjudicating Plaintiffs' ERISA fiduciary breach and prohibited transaction claims with respect to all Class members.

236. **Ascertainability:** The Class is readily ascertainable and is one for which records should exist.

237. **Numerosity.** The members of the Class are so numerous that joinder of all members is impracticable. While the exact number of Class members is unknown to Plaintiffs and can only be ascertained through appropriate discovery, Plaintiffs believe

that hundreds of ERISA plans with thousands of participants¹⁶² throughout the country sustained losses because of Defendants' unlawful Schemes. ERISA pension assets alone totaled \$17.5 trillion in 2011.¹⁶³ In 2012, defined benefit ERISA pension plans in the top 200 plans invested \$372 billion in active international equities,¹⁶⁴ much of which likely was exposed to Defendants' massive and improper Schemes. Defendants were responsible for 82% of the \$5.3 trillion daily global FX market in 2013.

238. **Commonality.** The claims of Plaintiffs and all Class members originate from the same misconduct, breaches of duties, and violations of ERISA perpetrated by Defendants with regard to their two manipulative and secret Schemes. The questions of law and fact common to the Class include, but are not limited to:

- a. Whether Defendants participated in a scheme to fix, raise, elevate, maintain, or stabilize the WM/Reuters Closing Spot Rates;
- b. Whether Defendants participated in a scheme to fix, raise, elevate, maintain or stabilize the European Central Bank FX rates or other FX fixing rates;
- c. Identifying the participants in the alleged manipulation of the WM/Reuters Closing Spot Rates, the European Central Bank FX rate, or other FX fixing rate;

¹⁶² In 2012, the Caterpillar Retirement Plan reported 49,146 participants and beneficiaries. In 2013, the Caterpillar Benefit Plan reported 13,893 participants and beneficiaries. In 2011, the Bridgestone Plan reported 11,785 participants and beneficiaries.

¹⁶³ *World Briefs*, PENSIONS & INVESTMENTS, p. 50 (May 27, 2013).

¹⁶⁴ Rick Baert, *Developed, emerging markets stocks both enjoy solid increases*, PENSIONS & INVESTMENTS (Feb. 4, 2013) (available at <http://goo.gl/7CcvRm>).

- d. Identifying the duration of the manipulative schemes alleged herein;
- e. Whether Defendants' manipulation of the FX Spot Market impacted the rates at which FX Transactions for Class Plaintiffs were priced;
- f. Whether each Defendant executed foreign currency transactions for ERISA plans in a manner that reaped that Defendant improper profits at the expense of its ERISA clients;
- g. Whether Defendants were ERISA fiduciaries to the Class members;
- h. Whether Defendants exercised discretion over ERISA assets by setting their own compensation when they manipulated the WM/Reuters Closing Spot Rates and the FX Spot Market to Defendants' benefit and failed to inform Class members that the FX Spot Market was manipulated;
- i. Whether Defendants exercised discretion over ERISA assets by setting their own compensation when a Defendant secretly used internal techniques to execute FX Transactions that improperly benefited them at the expense of their ERISA clients;
- j. Whether Defendants breached their fiduciary duties of prudence and loyalty to members of the Class by exercising discretion in transacting or authorizing FX Transactions for members of the Class based on the WM/Reuters Closing Spot Rates and other fixing rates while knowing that those rates were manipulated;
- k. Whether Defendants breached their fiduciary duties of prudence and loyalty to members of the Class when a Defendant secretly using internal

techniques to execute FX Transactions that improperly benefited them at the expense of their ERISA clients;

1. Whether Defendants breached their fiduciary duties of prudence and loyalty to members of the Class by failing to inform them that the FX Spot Markets were manipulated when Defendants as fiduciaries transacted or oversaw FX Transactions for members of the Class based on manipulated FX fixing rates;
- m. Whether Defendants breached their fiduciary duties of prudence and loyalty to Class members by failing to inform the Class Members that Defendant secretly used internal techniques to execute FX Transactions that improperly benefited them at the expense of their ERISA Clients;
- n. Whether Defendants' actions constituted self-dealing and transactions prohibited by ERISA;
- o. Whether Defendants' fiduciary breaches caused losses to Plaintiffs and the Class, and profits to the Defendants;
- p. Whether Defendants' prohibited transactions caused losses to Plaintiffs and Class members; and
- q. Identifying the appropriate nature of Class-wide injunctive or other equitable relief.

239. **Typicality.** Plaintiffs' claims on behalf of their Plans are not only typical of, but the same as, claims that would be brought with respect to other Plans. Individual cases would require each member of the Class to prove the same claims based upon the

same conduct of the Defendants, using the same legal theories, and would seek the same relief.

240. **Adequacy.** Plaintiffs will fairly and adequately protect the interests of Class members. Plaintiffs have no interests antagonistic to, or in conflict with, those of the Class. Plaintiffs will vigorously protect the interests of absent Class members. Plaintiffs have retained counsel who are competent and have extensive experience in complex, class action, and ERISA litigation. Plaintiffs' counsel includes the firms of McTigue Law LLP and Grais & Ellsworth LLP.

241. **Rule 23(b)(1)(A) & (B) Requirements.** Class action status is warranted under Federal Rule of Civil Procedure 23(b)(1)(A) because prosecution of separate actions by Class members would create a risk of establishing incompatible standards of conduct for Defendants. Class action status is also warranted under Rule 23(b)(1)(B), because prosecution of separate actions by Class members would create a risk of adjudications with respect to individual Class members that, as a practical matter, would be dispositive of the interests of other members not parties to this action, or that would substantially impair or impede their ability to protect their interests.

242. **Rule 23(b)(2) Requirements.** Certification under Rule 23(b)(2) is warranted because Defendants have acted or refused to act on grounds generally applicable to the Class, thereby making appropriate final injunctive, declaratory, or other equitable relief with respect to the Class as a whole. No plan-by-plan inquiry would be required to determine whether Defendants breached their fiduciary duties.

243. **Rule 23(b)(3) Requirements.** In the alternative, certification under Rule 23(b)(3) is appropriate because questions of law or fact common to Class members

predominate over any questions affecting only individual members, and class action treatment is superior to the other available methods for the fair and efficient adjudication of this controversy.

VIII. CLAIMS FOR RELIEF

COUNT I

Breach of Duties of Prudence and Loyalty (Violation of ERISA, 29 U.S.C. §1104 by All Defendants)

244. All previous averments are incorporated herein.
245. At all relevant times, the Defendants were fiduciaries of the Plans within the meaning of ERISA, 29 U.S.C. §1002(21)(A).
246. Defendants exercised discretionary authority or control with respect to management of the Plans or the disposition of the assets of the Plans when they executed or authorized FX Transactions for the Plans to be priced at or around the manipulated FX Spot Market fixing times (or based on those FX Spot Market fixing rates) at the same time they were manipulating the FX Spot Market fixing rates to their financial benefit.
247. Defendants exercised discretionary authority or control with respect to management of the Plans or the disposition of the assets of the Plans by setting their own compensation when they executed or authorized FX Transactions for the Plans to be priced at or around the manipulated FX Spot Market fixing rate times (or based on those FX Spot Market fixing rates) at the same time they were manipulating the FX Spot Market fixing rates to their financial benefit.
248. Defendants breached their ERISA fiduciary duties of prudence and loyalty, 29 U.S.C. §1104(a)(1)(A), (B), when executing FX trades with Plan assets by, *inter alia*:

- a. Pricing FX Transactions involving the assets of the Plans (or the Collective Investment Funds or Separately Managed Accounts in which the Plans invested) at or around the FX Spot Market fixing times or based on manipulated FX Spot Market fixing rates, which resulted in excessive and windfall profits for Defendants that were far in excess of what fully informed parties would have agreed to for comparable transactions in an arm's-length bargain;
- b. Failing to disclose to the Plans, their fiduciaries, or participants that while Defendants were engaging in FX Transactions for the Plans, they were setting their own compensation and charging the Plans much higher rates than what the parties would have agreed to in an arm's-length transaction;
- c. Failing to disclose to the Plans, their fiduciaries, or participants that Defendants intended to act exclusively for their own benefit when executing FX Transactions;
- d. Failing to provide full disclosure to the Plans, their fiduciaries, or participants and beneficiaries of the scheme to manipulate the FX Spot Market fixing rates (which prevented the Plans from assessing the reasonableness of those FX Transactions and Defendants' charges), while concurrently exercising discretion with assets of the Plans by executing or facilitating FX Transactions for the Plans at or around the manipulated FX Spot Market fixing times or based on those fixing rates;
- e. Appropriating the assets of the Plans for Defendants' own benefit, and reducing the assets of the Plans by tens, if not hundreds, of millions of dollars.

249. Each Defendant committed these breaches in its fiduciary capacity, as described, each time it executed or authorized the execution of FX Transaction involving assets of the Plans that were transacted at or around the FX Spot Market fixing times, or that were based on manipulated FX fixing rates.

250. As a direct and proximate result of these breaches of fiduciary duty, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

251. Pursuant to ERISA, Defendants are liable to restore all losses suffered by the Plans caused by the Defendants' breaches of fiduciary duty, and disgorge all profits earned.

COUNT II

Engaging in Self-Interested Prohibited Transactions with Plan Assets (Violation of ERISA, 29 U.S.C. §1106(b)(1) by All Defendants)

252. All previous averments are incorporated herein.

253. ERISA prohibits fiduciaries from engaging in certain transactions and imposes strict liability for any losses that result. Specifically, "a fiduciary with respect to a plan shall not . . . deal with the assets of the plan in his own interest or for his own account. . ." 29 U.S.C. §1106(b)(1).

254. Each Defendant, acting as a fiduciary to a Plan or Plans, committed prohibited transactions when it dealt with the assets of the Plans for its own interest and for its own account by executing or authorizing FX Transactions on behalf of the Plans, while they participated in the manipulation of the FX Spot Market fixing rates. As a

result, Defendants' reaped secret profits not disclosed to the Plans and enriched themselves at the expense of the Plans and their participants.

255. Notably, the terms of the FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

256. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

257. Pursuant to ERISA, Defendants must disgorge all fees paid them for the Plans' FX transactions, restore all losses suffered by the Plans from the prohibited transactions, and disgorge all profits earned on the fees paid by the Plans to Defendants.

COUNT III

Acting in on Behalf of a Party with Interests Adverse to the Plans (Violation of ERISA, 29 U.S.C. §1106(b)(2) by All Defendants)

258. All previous averments are incorporated herein.

259. ERISA prohibits fiduciaries from engaging in certain activities and imposes strict liability for any losses that result. Specifically, "a fiduciary with respect to a plan shall not . . . act in any transaction involving the plan on behalf of a party. . . whose interests are adverse to the interests of the plan or the interests of its participants or beneficiaries. . ." 29 U.S.C. §1106(b)(2).

260. Each Defendant, acting as a fiduciary to a Plan or Plans, committed prohibited transactions when it participated in transactions involving the assets of the Plans on behalf of each of the other bank participants in the FX Rate Collusion Scheme.¹⁶⁵ Each Defendant colluded with the participating bank entities to reap secret profits (either for itself or other participating banks) and did not disclose this collusion to the Plans. Each defendant enriching itself at the expense of the Plans and their participants and beneficiaries in violation of this provision 1) when a Defendant conducted FX Transactions as custodian or non-custodian, or 2) when a Defendant served as investment manager to a Plan and arranged for any other banking institution participating in the FX Rate Collusion Scheme to conduct FX Transactions. A prohibited transaction occurred each time an action by a Defendant resulted in FX Transactions involving Plan assets that were priced at or near the manipulated FX Spot Market fixing times, or when an FX Transaction was priced based on a manipulated FX fixing rate.

261. Notably, the terms of the FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

262. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

¹⁶⁵ All Defendants plus BNP Paribas.

263. Pursuant to ERISA, Defendants must disgorge all fees paid them for the Plans' FX transactions, restore all losses suffered by the Plans from the prohibited transactions, and disgorge all profits earned on the fees paid by the Plans to Defendants.

COUNT IV

Causing the Plans to Engage in Party in Interest Prohibited Transactions (Violation of ERISA, 29 U.S.C. §1106(a)(1) by All Defendants)

264. All previous averments are incorporated herein.

265. ERISA prohibits fiduciaries from causing a plan to engage in certain transactions with parties in interest with respect to a plan, specifically:

A fiduciary with respect to a plan shall not cause the plan to engage in a transaction, if he knows or should know that such transaction constitutes a direct or indirect –

(A) sale or exchange, or leasing, of any property between the plan and a party in interest; [or],

* * * *

(D) transfer to, or use by or for the benefit of, a party in interest, of any assets of the plan[.]

29 U.S.C. §1106(a)(1).

266. Defendants caused the Plans to enter into transactions with parties in interest. 29 U.S.C. §1002(14)(A), (B) (a party in interest with respect to a plan includes “any fiduciary (including, but not limited to, any administrator, officer, trustee, or custodian)...[or] a person providing services to such plan...”).

267. Defendants' actions caused Plans to transfer plan assets to a party in interest with respect to the Plans. As custodian, Defendants transferred assets to the FX trading arm of the Defendant itself, a party in interest. As participants in FX Transactions, Defendants transferred assets to themselves, as a party in interest, through

the FX Rate Collusion Scheme. As Plan investment managers, Defendants authorized FX Transactions with assets of the Plans to be executed by another bank participating in the FX Rate Collusion Scheme. That bank, as a participant in the FX transaction, was a party in interest to the Plans. These transfers of a Plan's assets to, and use of Plan assets for the benefit of, the party in interest (Defendant or a colluding bank that participated in the FX Transaction) allowed the party in interest to reap secret profits from the FX Rate Collusion Scheme.

268. These actions resulted in an exchange of property between the Plans and parties in interest, and for the benefit of the parties in interest, and are thus prohibited by ERISA.

269. Notably, the terms of the FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

270. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

271. Pursuant to ERISA, Defendants must disgorge all fees paid them for the Plans' FX transactions, restore all losses suffered by the Plans from the prohibited transactions, and disgorge all profits earned on the fees paid by the Plans to Defendants.

COUNT V

**Liability for Knowingly Participating in Prohibited Transaction as a Party in Interest
(Relief under ERISA, 29 U.S.C. §1132(a)(3) for Participation in a Transaction Prohibited by 29 U.S.C. §1106(a)(1), by All Defendants)**

272. All previous averments are incorporated herein.

273. This claim is pled in the alternative to the preceding counts. It is pled to the extent any Defendant is found not to be an ERISA fiduciary with respect to any of the conduct complained of above.

274. ERISA provides a cause of action against a nonfiduciary party in interest when such party participated in a transaction prohibited by 29 U.S.C. §1106(a)(1). As alleged above, Defendants, through their FX Rate Collusion Scheme, participated as a party in interest in prohibited transactions in violation of 29 U.S.C. §1106(a)(1)(A) and (D).

275. Defendants were parties in interest to the Plans as the entity that executed or authorized FX Transactions with assets of the Plans. Those transactions violated 29 U.S.C. §1106(a)(1)(A) and (D) for all the reasons stated above. FX Transactions that were based on the WM/Reuters Closing Spot Rates and other manipulated FX fixing rates generated profits for the Defendants that executed or authorized the transactions and for the other banks that participated in the FX Rate Collusion Scheme.

276. Notably, the terms of the FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

277. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

278. Pursuant to ERISA, Defendants are liable to disgorge all improperly paid markups and markdowns for the Plans' FX transactions, to restore all losses suffered by the Plans as a result of the prohibited transactions, and to disgorge all profits earned on the fees paid by the Plans to Defendants.

COUNT VI

Breach of Duties of Prudence and Loyalty (Violation of ERISA, 29 U.S.C. §1104 by Barclays, Citigroup, JPMorgan, RBS and UBS)

279. All previous averments are incorporated herein.

280. At all relevant times, Defendants were fiduciaries of the Plans within the meaning of ERISA, 29 U.S.C. §1002(21)(A).

281. Defendants exercised discretionary authority and control with respect to the management of the Plans or the disposition of the assets of the Plans when they used secret techniques to execute foreign currency transactions on behalf of the Plans using In-House FX Manipulation Schemes. As a result, Defendants reaped improper profits at the expense of their ERISA clients.

282. Defendants exercised discretionary authority and control with respect to the management of the Plans or the disposition of assets of the Plans when they set their own compensation by using secret techniques to execute foreign currency transactions of behalf of the Plans using In-House FX Manipulation Schemes.

283. Defendants breached their ERISA fiduciary duties of prudence and loyalty, 29 U.S.C. §1104(a)(1)(A), (B), when executing FX trades for the Plans or with the assets of the Plans by:

- a. Pricing the FX Transactions involving assets of the Plan (or the Collective Investment Funds or Separately Managed Accounts in which the Plans invested) through the In-House FX Manipulation Scheme, which resulted in defendants reaping improper profits at the expense of their ERISA clients.
- b. Failing to disclose to the Plans, their fiduciaries, or participants that Defendants were setting their own compensation for FX Transactions with the Plans and charging the Plans much higher rates than what the parties would have agreed to in an arm's-length negotiation;
- c. Failing to disclose to the Plans, their fiduciaries, or participants that Defendants intended to act exclusively for their own benefit when executing FX Transactions;
- d. Appropriating the assets of the Plans for their own benefit, and reducing the assets of the Plans by tens, if not hundreds, of millions of dollars.

284. Each Defendant committed these breaches in its fiduciary capacity, as described, during each FX Transaction involving assets of the Plans that were transacted by Defendants using improper and secret in-house techniques.

285. As a direct and proximate result of these breaches of fiduciary duty, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

286. Pursuant to ERISA, the Defendants are liable to restore all losses suffered by the Plans caused by the Defendants' breaches of fiduciary duty, and disgorge all profits earned.

COUNT VII

Engaging in Self-Interested Prohibited Transactions with Plan Assets (Violation of ERISA, 29 U.S.C. §1106(b)(1) by Barclays, Citigroup, JPMorgan, RBS and UBS)

287. All previous averments are incorporated herein.

288. ERISA prohibits fiduciaries from engaging in certain transactions and imposes strict liability for any losses that result. Specifically, "a fiduciary with respect to a plan shall not . . . deal with the assets of the plan in his own interest or for his own account. . ." 29 U.S.C. §1106(b)(1).

289. Each Defendant, acting as a fiduciary to a Plan or Plans, committed prohibited transactions in when it dealt with the assets of the Plans for its own interest and for its own account in executing FX Transactions on behalf of the Plans using techniques that reaped Defendants' secret profits through the In-House FX Manipulation Scheme, which was not disclosed to the Plans, enriching themselves at the expense of the Plans and their participants

290. Notably, the terms of these FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

291. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of

dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

292. Pursuant to ERISA, Defendants must disgorge all fees paid them for the Plans' FX transactions, restore all losses suffered by the Plans from the prohibited transactions, and disgorge all profits earned on the fees paid by the Plans to Defendants.

COUNT VIII

Acting on Behalf of a Party with Interests Adverse to the Plans (Violation of ERISA, 29 U.S.C. §1106(b)(2) by Barclays, Citigroup, JPMorgan, RBS and UBS)

293. All previous averments are incorporated herein.

294. ERISA prohibits fiduciaries from engaging in certain activities and imposes strict liability for any losses that result. Specifically, "a fiduciary with respect to a plan shall not . . . act in any transaction involving the plan on behalf of a party . . . whose interests are adverse to the interests of the plan or the interests of its participants or beneficiaries . . ." 29 U.S.C. §1106(b)(2).

295. Each Defendant, acting as a fiduciary to a Plan, entered into a prohibited transaction each time it executed an FX Transaction using the In-House FX Manipulation Schemes, thereby enriching itself at the expense of the Plans and their participants and beneficiaries.

296. Notably, the terms of the FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

297. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

298. Pursuant to ERISA, Defendants must disgorge all fees paid them for the Plans' FX transactions, restore all losses suffered by the Plans from the prohibited transactions, and disgorge all profits earned on the fees paid by the Plans to Defendants.

COUNT IX

Causing the Plans to Engage in Party in Interest Prohibited Transactions (Violation of ERISA, 29 U.S.C. §1106(a)(1) by Barclays, Citigroup, JPMorgan, RBS and UBS)

299. All previous averments are incorporated herein.

300. ERISA prohibits fiduciaries from causing a plan to engage in certain transactions with parties in interest with respect to a plan, specifically:

A fiduciary with respect to a plan shall not cause the plan to engage in a transaction, if he knows or should know that such transaction constitutes a direct or indirect –

(A) sale or exchange, or leasing, of any property between the plan and a party in interest; [or],

* * * *

(D) transfer to, or use by or for the benefit of, a party in interest, of any assets of the plan[.]

29 U.S.C. §1106(a)(1).

301. Defendants caused the Plans to enter into transactions with parties in interest. 29 U.S.C. §1002(14)(A), (B) (a party in interest with respect to a plan includes “any fiduciary (including, but not limited to, any administrator, officer, trustee, or custodian)...[or] a person providing services to such plan...”).

302. Defendants' actions caused the Plans to transfer plan assets to a party in interest with respect to the Plans, namely the FX trading arms of Defendants themselves to execute FX Transactions with assets of the Plans. These transfers of Plan assets to, and use of Plan assets for the benefit of, the parties in interest allowed the parties in interest to reap secret profits through the use of the In-House FX Manipulation Scheme.

303. These actions resulted in an exchange of property between the Plans and parties in interest, and for the benefit of the parties in interest, and are thus prohibited by ERISA.

304. Notably, the terms of the FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

305. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

306. Pursuant to ERISA, Defendants must disgorge all fees paid them for the Plans' FX transactions, restore all losses suffered by the Plans from the prohibited transactions, and disgorge all profits earned on the fees paid by the Plans to Defendants.

COUNT X

Liability for Knowingly Participating in Prohibited Transaction as a Party in Interest

(Relief under ERISA, 29 U.S.C. §1132(a)(3) for Participation in a Transaction Prohibited by 29 U.S.C. §1106(a)(1), by Barclays, Citigroup, JPMorgan, RBS and UBS)

307. All previous averments are incorporated herein.

308. This claim is pled in the alternative to the preceding Counts VI-IX. It is pled to the extent any Defendant is found not to be an ERISA fiduciary with respect to any of the conduct complained in Counts VI-IX.

309. ERISA provides a cause of action against a nonfiduciary party in interest when such party participated in a transaction prohibited by 29 U.S.C. §1106(a)(1). As alleged above, Defendants through their In-House FX Manipulation Scheme participated as a party in interest in prohibited transactions in violation of 29 U.S.C. §1106(a)(1)(A) and (D).

310. Defendants as the entity that executed or authorized FX Transactions with assets of the Plans were parties in interest to the Plans. Those transactions violated 29 U.S.C. §1106(a)(1)(A) and (D) for the reasons stated above. Defendants reaped improper profits at the expense of their ERISA Clients using the In-House FX Manipulation Schemes. These transactions were not negotiated by fully informed parties making an arm's-length agreement.

311. Notably, the terms of the FX Transactions were less favorable to the Plans than terms that would have generally been available in comparable arm's-length FX Transactions between unrelated parties, and that would have been available from Defendants in comparable arm's-length FX Transactions involving unrelated parties had the Defendants' manipulation and concealment not occurred.

312. As a direct and proximate result of these prohibited transactions, the Plans and their participants and beneficiaries suffered tens, if not hundreds, of millions of dollars of losses. Moreover, for the defined benefit plans in the Class, these losses increased the risk of non-payment of future benefits to participants and beneficiaries.

313. Pursuant to ERISA, Defendants are liable to disgorge all improperly paid markups and markdowns for the Plans' FX transactions, to restore all losses suffered by the Plans as a result of the prohibited transactions, and to disgorge all profits earned on the fees paid by the Plans to Defendants.

JURY DEMAND

314. Plaintiffs demand a trial by a jury of six (6) persons as to all claims triable by jury.

IX. PRAYER FOR RELIEF

WHEREFORE, Plaintiffs prays for relief as follows:

- a. Declare that the Defendants breached their fiduciary duties under ERISA;
- b. Declare that the Defendants have violated ERISA's prohibited transactions provisions;
- c. Issue an order compelling a proper accounting of the FX Transactions in which the Plans have engaged;
- d. Issue an order compelling Defendants to restore all losses caused to the Plans (or that will be caused to the Plans after the filing of this Complaint), including lost investment returns on money that would have been invested but for Defendants' illegal conduct;

- e. Issue an order compelling the Defendants to disgorge all fees paid to or incurred by the Plans (or that will be paid or incurred by the Plans after the filing of this Complaint), including any profits thereon;
- f. Order surcharge, equitable restitution, and other appropriate equitable monetary relief against the Defendants;
- g. Award such other equitable or remedial relief as may be appropriate, including the permanent removal of the Defendants from any positions of trust with respect to the Plans and the appointment of independent fiduciaries to select or serve as custodian or trustee to the Plans;
- h. Order that this action be certified as a class action and that a constructive trust be established for distribution to the extent required by law;
- i. Enjoin Defendants collectively, and each of them individually, from any further violations of their fiduciary responsibilities, obligations, and duties under ERISA;
- j. Award Plaintiffs' attorneys' fees and costs pursuant to ERISA, 29 U.S.C. §1132(g) or the Common Fund doctrine; and
- k. Award such other and further relief as the Court deems equitable and just.

Respectfully submitted,

DATED: New York, NY
June 3, 2015

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Appendix 1

Date	BARCLAYS	Currency Pair	\$US Value
July 30, 2009	BARCLAYS WHOLESALE GTS	USD / EUR	-10,324,266.06
July 31, 2009	BARCLAYS WHOLESALE GTS	EUR / USD	-1,584,766.80
August 3, 2009	BARCLAYS WHOLESALE GTS	USD / SEK	-8,640,056.91
August 24, 2009	BARCLAYS WHOLESALE GTS	EUR / USD	-9,016,123.84
August 31, 2009	BARCLAYS WHOLESALE GTS	CAD / USD	5,381,886.97
September 8, 2009	BARCLAYS WHOLESALE GTS	USD / CAD	115,609.09
September 21, 2009	BARCLAYS WHOLESALE GTS	USD / GBP	5,081,175.12
October 12, 2009	BARCLAYS WHOLESALE GTS	NZD / USD	3,733,602.55
October 19, 2009	BARCLAYS WHOLESALE GTS	USD / NZD	53,856.00
October 19, 2009	BARCLAYS WHOLESALE GTS	USD / NZD	30,668.00
November 2, 2009	BARCLAYS WHOLESALE GTS	EUR / USD	64,450.55
January 21, 2010	BARCLAYS WHOLESALE GTS	GBP / USD	89,862.29
April 19, 2010	BARCLAYS WHOLESALE GTS	USD / GBP	-26,082.25
May 10, 2010	BARCLAYS WHOLESALE GTS	USD / GBP	-7,205,525.06
June 1, 2010	BARCLAYS WHOLESALE GTS	GBP / USD	209,292.31
August 2, 2010	BARCLAYS WHOLESALE GTS	USD / GBP	-13,237,320.11
August 9, 2010	BARCLAYS WHOLESALE GTS	USD / GBP	-8,608,177.17
September 7, 2010	BARCLAYS WHOLESALE GTS	USD / MXN	-7,073,979.39
September 27, 2010	BARCLAYS WHOLESALE GTS	GBP / USD	27,067.40
September 28, 2010	BARCLAYS WHOLESALE GTS	RUB / USD	144,913.42
December 15, 2010	BARCLAYS WHOLESALE GTS	USD / TWD	-4,680,316.75
February 1, 2011	BARCLAYS WHOLESALE GTS	MXN / USD	3,643,949.24
March 14, 2011	BARCLAYS WHOLESALE GTS	EUR / USD	9,491,282.43
April 11, 2011	BARCLAYS WHOLESALE GTS	GBP / USD	9,789.30
July 5, 2011	BARCLAYS WHOLESALE GTS	USD / JPY	-117,130.08
July 12, 2011	BARCLAYS WHOLESALE GTS	BRL / USD	169,714.89
August 1, 2011	BARCLAYS WHOLESALE GTS	CAD / USD	7,414,393.06
October 18, 2011	BARCLAYS WHOLESALE GTS	INR / USD	155,359.47
October 24, 2011	BARCLAYS WHOLESALE GTS	USD / JPY	-20,362.93
October 31, 2011	BARCLAYS WHOLESALE GTS	JPY / USD	-6,031,639.72
November 7, 2011	BARCLAYS BANK PLC WHOLESALE	USD / JPY	-12,114,362.83
November 28, 2011	BARCLAYS BANK PLC WHOLESALE	CAD / USD	6,189,564.62
November 28, 2011	BARCLAYS BANK PLC WHOLESALE	CAD / USD	-6,108,430.70
January 30, 2012	BARCLAYS BANK PLC WHOLESALE	USD / NZD	6,521,846.76
March 27, 2012	BARCLAYS BANK PLC WHOLESALE	ILS / USD	-65,676.14
May 1, 2012	BARCLAYS BANK PLC WHOLESALE	USD / ILS	-102,304.46
May 1, 2012	BARCLAYS BANK PLC WHOLESALE	USD / ILS	103,573.61
June 4, 2012	BARCLAYS BANK PLC WHOLESALE	USD / AUD	-9,913,157.57
August 10, 2012	BARCLAYS BANK PLC WHOLESALE	BRL / USD	103,505.52
August 14, 2012	BARCLAYS BANK PLC WHOLESALE	USD / KRW	-4,551,055.16
October 30, 2012	BARCLAYS BANK PLC WHOLESALE	USD / RUB	-6,397,142.54
November 26, 2012	BARCLAYS BANK PLC WHOLESALE	USD / CHF	-1,298,659.52
February 5, 2013	BARCLAYS BANK PLC WHOLESALE	USD / RUB	14,806.93
April 2, 2013	BARCLAYS BANK PLC WHOLESALE	RUB / USD	-140,568.66
May 6, 2013	BARCLAYS BANK PLC WHOLESALE	USD / NOK	9,132,112.70
July 1, 2013	BARCLAYS BANK PLC WHOLESALE	USD / GBP	249,641.78
July 22, 2013	BARCLAYS BANK PLC WHOLESALE	AUD / USD	-4,335,049.18
July 30, 2013	BARCLAYS BANK PLC WHOLESALE	RUB / USD	-6,052,439.99
August 5, 2013	BARCLAYS BANK PLC WHOLESALE	GBP / USD	-39,853.06
October 7, 2013	BARCLAYS BANK PLC WHOLESALE	USD / GBP	2,761,779.49

Date	CITIGROUP	Currency Pair	\$US Value
June 28, 2011	CITIBANK N.A. LONDON	USD / RUB	-5,104,790.85
July 5, 2011	CITIBANK NEW YORK	RUB / USD	4,669,717.56
July 19, 2011	CITIBANK NEW YORK	RUB / USD	-7,830,382.64
August 2, 2011	CITIBANK N.A. LONDON	INR / USD	8,204,517.32
August 9, 2011	CITIBANK NEW YORK	CLP / USD	85,473.21
August 9, 2011	CITIBANK NEW YORK	CLP / USD	-84,260.35
August 15, 2011	CITIBANK N.A. LONDON	SEK / USD	136,718.90
August 15, 2011	CITIBANK N.A. LONDON	SEK / USD	-75,480.51
August 16, 2011	CITIBANK NEW YORK	INR / USD	2,488,152.89
August 23, 2011	CITIBANK N.A. LONDON	CLP / USD	8,209,393.03
August 23, 2011	CITIBANK N.A. LONDON	CLP / USD	-8,981,313.22
August 24, 2011	CITIBANK NEW YORK	SEK / USD	211,211.25
August 24, 2011	CITIBANK NEW YORK	USD / INR	8,253,902.71
September 6, 2011	CITIBANK NEW YORK	USD / SEK	-3,007,067.80
October 10, 2011	CITIBANK N.A. LONDON	SEK / USD	-277,473.80
October 24, 2011	CITIBANK N.A. LONDON	SEK / USD	98,672.83
October 31, 2011	CITIBANK N.A. LONDON	USD / SEK	-3,687,955.06
October 31, 2011	CITIBANK N.A. LONDON	USD / SEK	6,102,885.96
November 1, 2011	CITIBANK N.A.	RUB / USD	-4,058,812.16
December 5, 2011	CITIBANK N.A.	CHF / USD	8,875,671.12
January 3, 2012	CITIBANK N.A.	RUB / USD	163,820.38
January 3, 2012	CITIBANK N.A.	NZD / USD	-6,346,511.36
January 30, 2012	CITIBANK N.A.	NOK / USD	5,563,015.54
February 7, 2012	CITIBANK N.A.	TWD / USD	56,291.17
February 28, 2012	CITIBANK N.A.	USD / TWD	-4,899,784.98
April 16, 2012	CITIBANK N.A.	NZD / USD	6,197,700.23
June 5, 2012	CITIBANK N.A.	SGD / USD	4,388,731.95
August 3, 2012	CITIBANK N.A.	ZAR / USD	-272,250.22
August 7, 2012	CITIBANK N.A.	ZAR / USD	4,411,190.94
September 10, 2012	CITIBANK N.A.	SEK / USD	1,965,296.69
October 2, 2012	CITIBANK N.A.	INR / USD	-3,142,047.18
October 30, 2012	CITIBANK N.A.	INR / USD	6,444,091.51
November 20, 2012	CITIBANK N.A.	INR / USD	-91,071.71
December 17, 2012	CITIBANK N.A.	JPY / USD	8,451,607.45
December 24, 2012	CITIBANK N.A.	CAD / USD	-13,594,453.79
December 31, 2012	CITIBANK N.A.	BRL / USD	3,398,914.35
January 15, 2013	CITIBANK N.A.	USD / KRW	-565,815.26
January 15, 2013	CITIBANK N.A.	USD / INR	12,587.44
February 19, 2013	CITIBANK N.A.	GBP / USD	-2,323,995.84
March 25, 2013	CITIBANK N.A.	GBP / USD	-12,152.72
April 1, 2013	CITIBANK N.A.	USD / GBP	-42,816.20
April 15, 2013	CITIBANK N.A.	GBP / USD	-9,938,682.18
April 16, 2013	CITIBANK N.A.	USD / INR	4,811,736.48
April 29, 2013	CITIBANK N.A.	GBP / USD	28,988.30
June 3, 2013	CITIBANK N.A.	NOK / USD	22,284,510.89
July 1, 2013	CITIBANK N.A.	USD / CAD	-8,547,830.73
July 1, 2013	CITIBANK N.A.	SEK / USD	8,710,387.26
July 9, 2013	CITIBANK N.A.	USD / TWD	-6,037,363.85
October 14, 2013	CITIBANK N.A.	USD / CHF	44,106.78
October 28, 2013	CITIBANK N.A.	CHF / USD	-13,799,351.30

Date	CREDIT SUISSE	Currency Pair	\$US Value
March 5, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / CAD	6,759,100.70
March 19, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	CAD / USD	28,353.00
March 26, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	CAD / USD	-3,029,722.54
June 4, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	NZD / USD	2,455,990.46
June 11, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / NZD	-50,508.80
July 3, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / TWD	-4,391,924.62
July 9, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / CAD	4,901.07
July 16, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	CAD / USD	-6,741,904.84
July 16, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	CAD / USD	1,059,186.98
July 16, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	CAD / USD	6,717,010.74
July 17, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	TWD / USD	-1,410,245.29
August 6, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / CHF	-6,971,536.21
August 7, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / TWD	-9,168,362.75
August 10, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	TWD / USD	207,033.47
August 14, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	MXN / USD	4,491,148.30
August 28, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	TWD / USD	-2,248,629.68
August 28, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / MXN	2,254,048.93
September 4, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	NOK / USD	-8,617,936.65
September 5, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	TWD / USD	-1,126,919.21
September 24, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / NOK	1,901,809.13
October 3, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / NOK	-1,229,264.89
October 8, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / NOK	8,691,751.11
October 15, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / NOK	12,949,677.53
October 15, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / NOK	-12,930,679.24
November 5, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	CAD / USD	43,577.40
November 12, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / CAD	8,806,896.82
November 13, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / ZAR	-3,303,014.58
November 19, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / CAD	-4,028,375.98
December 3, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / GBP	14,486.36
December 4, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / ZAR	-3,315,359.52
December 10, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / GBP	6,674,477.34
December 11, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	ZAR / USD	-3,292,008.96
December 31, 2012	CREDIT SUISSE SECURITIES (EUROPE) LTD	GBP / USD	4,827.00
January 7, 2013	CREDIT SUISSE SECURITIES (EUROPE) LTD	USD / GBP	-74,014.01
March 4, 2013	CREDIT SUISSE INTERNATIONAL	NZD / USD	-63,363.30
March 11, 2013	CREDIT SUISSE INTERNATIONAL	USD / NZD	9,099,482.92
March 25, 2013	CREDIT SUISSE INTERNATIONAL	USD / NZD	-14,016,677.07
March 25, 2013	CREDIT SUISSE INTERNATIONAL	USD / NZD	10,049,982.66
June 3, 2013	CREDIT SUISSE INTERNATIONAL	USD / CHF	-4,285,947.09
June 3, 2013	CREDIT SUISSE INTERNATIONAL	USD / CHF	2,142,362.79
June 25, 2013	CREDIT SUISSE INTERNATIONAL	USD / ZAR	1,550,644.62
July 1, 2013	CREDIT SUISSE INTERNATIONAL	JPY / USD	-4,327,404.35
July 9, 2013	CREDIT SUISSE INTERNATIONAL	ZAR / USD	3,015,505.04
July 16, 2013	CREDIT SUISSE INTERNATIONAL	ILS / USD	-102,672.34
August 6, 2013	CREDIT SUISSE INTERNATIONAL	ILS / USD	156,177.32
August 6, 2013	CREDIT SUISSE INTERNATIONAL	ILS / USD	-156,063.37
September 16, 2013	CREDIT SUISSE INTERNATIONAL	JPY / USD	-5,462,801.01
September 30, 2013	CREDIT SUISSE INTERNATIONAL	USD / JPY	-78,305.64
October 14, 2013	CREDIT SUISSE INTERNATIONAL	SEK / USD	-8,201,906.51
October 21, 2013	CREDIT SUISSE INTERNATIONAL	USD / SEK	-8,316,626.67

Date	DEUTSCHE BANK	Currency Pair	\$US Value
July 29, 2011	DEUTSCHE BANK LONDON	JPY / USD	1,078,203.38
August 1, 2011	DEUTSCHE BANK LONDON	JPY / USD	7,734,966.62
August 1, 2011	DEUTSCHE BANK LONDON	JPY / USD	-7,788,474.84
August 8, 2011	DEUTSCHE BANK LONDON	JPY / USD	9,619,107.70
August 8, 2011	DEUTSCHE BANK LONDON	JPY / USD	-9,528,937.28
August 24, 2011	DEUTSCHE BANK LONDON	USD / NZD	-255,424.50
August 29, 2011	DEUTSCHE BANK LONDON	NZD / USD	6,378,196.83
September 12, 2011	DEUTSCHE BANK LONDON	NZD / USD	15,459,415.21
September 12, 2011	DEUTSCHE BANK LONDON	USD / NZD	-9,159,851.98
September 12, 2011	DEUTSCHE BANK LONDON	USD / NZD	9,403,615.77
September 13, 2011	DEUTSCHE BANK LONDON	ZAR / USD	3,859,787.17
September 13, 2011	DEUTSCHE BANK LONDON	ZAR / USD	-4,140,780.83
September 19, 2011	DEUTSCHE BANK LONDON	USD / NZD	-17,426.20
September 19, 2011	DEUTSCHE BANK LONDON	USD / NZD	290,237.35
September 26, 2011	DEUTSCHE BANK LONDON	USD / NZD	-8,668,742.13
October 3, 2011	DEUTSCHE BANK LONDON	NZD / USD	-9,254,648.00
October 17, 2011	DEUTSCHE BANK LONDON	NZD / USD	-15,184,725.90
October 24, 2011	DEUTSCHE BANK LONDON	NZD / USD	55,922.83
October 24, 2011	DEUTSCHE BANK LONDON	USD / NZD	142,440.75
October 31, 2011	DEUTSCHE BANK LONDON	USD / NZD	15,528,205.92
January 3, 2012	DEUTSCHE BANK AG	USD / NOK	-57,115.66
January 3, 2012	DEUTSCHE BANK AG	USD / NOK	-5,024,006.95
January 10, 2012	DEUTSCHE BANK AG	USD / NOK	-4,734,405.25
March 13, 2012	DEUTSCHE BANK AG	PLN / USD	4,425,444.49
March 30, 2012	DEUTSCHE BANK AG	USD / PLN	-439,668.12
May 1, 2012	DEUTSCHE BANK AG	KRW / USD	1,579,414.81
May 29, 2012	DEUTSCHE BANK AG	TWD / USD	8,589,339.49
June 27, 2012	DEUTSCHE BANK AG	USD / AUD	-3,400,927.10
July 30, 2012	DEUTSCHE BANK AG	JPY / USD	102,713.38
August 6, 2012	DEUTSCHE BANK AG	JPY / USD	-6,654,909.68
September 11, 2012	DEUTSCHE BANK AG	ILS / USD	21,700.00
October 1, 2012	DEUTSCHE BANK AG	CAD / USD	2,827,838.10
October 2, 2012	DEUTSCHE BANK AG	USD / ILS	-64,844.00
October 8, 2012	DEUTSCHE BANK AG	USD / CAD	-4,287,787.06
October 9, 2012	DEUTSCHE BANK AG	USD / ZAR	-3,177,073.75
October 30, 2012	DEUTSCHE BANK AG	ILS / USD	6,303,248.63
November 13, 2012	DEUTSCHE BANK AG	USD / ILS	114,205.77
December 4, 2012	DEUTSCHE BANK AG	ILS / USD	1,961,958.30
January 7, 2013	DEUTSCHE BANK AG	USD / CHF	-92,702.38
January 7, 2013	DEUTSCHE BANK AG	USD / CHF	-18,324.89
January 15, 2013	DEUTSCHE BANK AG	ILS / USD	-11,799.41
January 22, 2013	DEUTSCHE BANK AG	CHF / USD	-3,901,720.11
April 22, 2013	DEUTSCHE BANK AG	AUD / USD	-70,591.14
April 29, 2013	DEUTSCHE BANK AG	AUD / USD	4,400,942.74
June 3, 2013	DEUTSCHE BANK AG	USD / AUD	9,157,876.31
July 15, 2013	DEUTSCHE BANK AG	NZD / USD	-6,514,416.15
July 29, 2013	DEUTSCHE BANK AG	USD / NZD	-10,899,546.74
August 20, 2013	DEUTSCHE BANK AG	USD / MXN	-2,959,941.96
September 3, 2013	DEUTSCHE BANK AG	SEK / USD	5,590,795.20
September 9, 2013	DEUTSCHE BANK AG	SEK / USD	-2,766,794.21

Date	GOLDMAN SACHS & CO.	Currency Pair	\$US Value
July 30, 2009	GOLDMAN SACHS & CO NW YK DTC 005	NOK / USD	-10,160,494.82
July 31, 2009	GOLDMAN SACHS & CO NW YK DTC 005	USD / NOK	-1,639,031.20
August 3, 2009	GOLDMAN SACHS & CO NW YK DTC 005	USD / NOK	-3,051,221.80
August 3, 2009	GOLDMAN SACHS & CO NW YK DTC 005	USD / NOK	2,582,523.79
August 10, 2009	GOLDMAN SACHS & CO NW YK DTC 005	CAD / USD	5,716,894.98
August 10, 2009	GOLDMAN SACHS & CO NW YK DTC 005	USD / NOK	5,661,854.63
August 24, 2009	GOLDMAN SACHS & CO NW YK DTC 005	NZD / USD	253,634.15
September 14, 2009	GOLDMAN SACHS & CO NW YK DTC 005	JPY / USD	-7,950,197.72
September 28, 2009	GOLDMAN SACHS & CO NW YK DTC 005	SEK / USD	35,273.37
September 28, 2009	GOLDMAN SACHS & CO NW YK DTC 005	SEK / USD	-58,216.23
October 5, 2009	GOLDMAN SACHS & CO NW YK DTC 005	USD / SEK	-5,258,623.18
October 12, 2009	GOLDMAN SACHS & CO NW YK DTC 005	JPY / USD	12,940,023.02
January 25, 2010	GOLDMAN SACHS & CO NW YK DTC 005	USD / EUR	-10,111,704.43
February 1, 2010	GOLDMAN SACHS & CO NW YK DTC 005	EUR / USD	31,259.30
April 5, 2010	GOLDMAN SACHS & CO NW YK DTC 005	JPY / USD	-5,781,248.84
May 10, 2010	GOLDMAN SACHS & CO NW YK DTC 005	USD / NZD	5,718,425.25
May 12, 2010	GOLDMAN SACHS & CO NW YK DTC 005	USD / NZD	-215,103.61
May 17, 2010	GOLDMAN SACHS & CO NW YK DTC 005	JPY / USD	174,400.71
July 26, 2010	GOLDMAN SACHS & CO NW YK DTC 005	JPY / USD	15,547,803.32
August 2, 2010	GOLDMAN SACHS & CO NW YK DTC 005	USD / JPY	-110,944.39
August 2, 2010	GOLDMAN SACHS & CO NW YK DTC 005	USD / JPY	107,786.65
September 14, 2010	GOLDMAN SACHS & CO NW YK DTC 005	USD / CLP	-2,293,460.46
September 28, 2010	GOLDMAN SACHS & CO NW YK DTC 005	PLN / USD	-2,256,064.32
November 1, 2010	GOLDMAN SACHS & CO NEW YORK DTC 005	JPY / USD	34,991.34
January 3, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	USD / EUR	-12,933.00
January 31, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	USD / EUR	-8,777,018.72
April 8, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	USD / EUR	-15,287,901.40
April 29, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	EUR / USD	155,929.21
July 11, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	GBP / USD	70,074.95
August 2, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	USD / ILS	-89,252.30
August 15, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	EUR / USD	262,617.61
September 19, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	EUR / USD	50,630.80
September 26, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	EUR / USD	27,368.00
October 18, 2011	GOLDMAN SACHS & CO NEW YORK DTC 005	ILS / USD	4,256,461.64
January 31, 2012	GOLDMAN, SACHS AND CO.	RUB / USD	4,991,488.09
April 2, 2012	GOLDMAN, SACHS AND CO.	USD / EUR	-18,397.40
April 9, 2012	GOLDMAN, SACHS AND CO.	AUD / USD	6,689,354.81
May 21, 2012	GOLDMAN, SACHS AND CO.	EUR / USD	9,942,309.60
May 21, 2012	GOLDMAN, SACHS AND CO.	EUR / USD	3,558,206.27
June 5, 2012	GOLDMAN, SACHS AND CO.	USD / PLN	-4,565,053.34
October 1, 2012	GOLDMAN, SACHS AND CO.	EUR / USD	8,547,310.26
October 3, 2012	GOLDMAN, SACHS AND CO.	SGD / USD	180,320.48
December 10, 2012	GOLDMAN, SACHS AND CO.	USD / EUR	13,651,478.40
February 28, 2013	GOLDMAN, SACHS AND CO.	USD / PLN	-492,405.53
April 1, 2013	GOLDMAN, SACHS AND CO.	USD / EUR	177,301.02
April 15, 2013	GOLDMAN, SACHS AND CO.	USD / EUR	-16,389,249.08
April 16, 2013	GOLDMAN, SACHS AND CO.	PLN / USD	-4,856,299.37
July 2, 2013	GOLDMAN, SACHS AND CO.	SGD / USD	63,551.84
August 20, 2013	GOLDMAN, SACHS AND CO.	ZAR / USD	3,064,950.76
August 20, 2013	GOLDMAN, SACHS AND CO.	ZAR / USD	-1,538,416.23

Date	HSBC	Currency Pair	\$US Value
July 20, 2009	HSBC BANK USA NEW YORK	AUD / USD	10,427,291.35
July 30, 2009	HSBC BANK USA NEW YORK	USD / AUD	16,962,299.98
July 31, 2009	HSBC BANK USA NEW YORK	AUD / USD	-12,577,441.10
August 3, 2009	HSBC BANK USA NEW YORK	USD / AUD	-108,888.00
September 8, 2009	HSBC BANK USA NEW YORK	USD / AUD	-288,797.39
September 8, 2009	HSBC BANK USA NEW YORK	USD / AUD	213,351.19
September 14, 2009	HSBC BANK USA NEW YORK	USD / AUD	-5,388,210.54
September 21, 2009	HSBC BANK USA NEW YORK	EUR / USD	-104,228.00
September 28, 2009	HSBC BANK USA NEW YORK	USD / AUD	-9,804.85
September 30, 2009	HSBC BANK USA NEW YORK	USD / AUD	-1,610,669.39
October 26, 2009	HSBC BANK USA NEW YORK	GBP / USD	3,858,576.66
November 2, 2009	HSBC BANK USA NEW YORK	AUD / USD	10,344,787.23
November 2, 2009	HSBC BANK USA NEW YORK	USD / GBP	-4,047,300.19
November 23, 2009	HSBC BANK USA NEW YORK	USD / SEK	-29,036.69
February 1, 2010	HSBC BANK USA NEW YORK	USD / AUD	-16,191.00
February 1, 2010	HSBC BANK USA NEW YORK	CAD / USD	15,386,901.91
February 8, 2010	HSBC BANK USA NEW YORK	AUD / USD	112,437.50
May 3, 2010	HSBC BANK USA NEW YORK	USD / CHF	-101,501.01
June 21, 2010	HSBC BANK USA NEW YORK	USD / CAD	-46,633.36
September 7, 2010	HSBC BANK USA NEW YORK	USD / TWD	-7,063,626.00
October 5, 2010	HSBC BANK USA NEW YORK	USD / SGD	-2,308,696.70
October 11, 2010	HSBC BANK USA NEW YORK	USD / NOK	-7,807.82
October 25, 2010	HSBC BANK USA NEW YORK	USD / NOK	-6,629,517.97
November 1, 2010	HSBC BANK USA NEW YORK	USD / CHF	-67,606.22
November 2, 2010	HSBC BANK USA NEW YORK	TWD / USD	76,093.47
December 6, 2010	HSBC BANK USA NEW YORK	CHF / USD	121,533.19
December 15, 2010	HSBC BANK USA NEW YORK	BRL / USD	3,858,972.11
December 17, 2010	HSBC BANK USA NEW YORK	USD / INR	-60,195.45
April 4, 2011	HSBC BANK USA NEW YORK	USD / NOK	-35,636.22
April 12, 2011	HSBC BANK USA NEW YORK	KRW / USD	8,432,554.49
May 17, 2011	HSBC BANK USA NEW YORK	USD / ILS	-176,110.26
June 6, 2011	HSBC BANK USA NEW YORK	USD / NOK	-69,749.25
June 28, 2011	HSBC BANK USA NEW YORK	USD / PLN	-5,067,114.09
September 6, 2011	HSBC BANK USA NEW YORK	USD / MXN	-79,769.46
September 6, 2011	HSBC BANK USA NEW YORK	USD / MXN	-173,279.46
September 27, 2011	HSBC BANK USA NEW YORK	MXN / USD	8,016,681.77
October 3, 2011	HSBC BANK USA NEW YORK	AUD / USD	5,788,772.19
October 4, 2011	HSBC BANK USA NEW YORK	USD / CLP	-3,786,720.72
October 31, 2011	HSBC BANK USA NEW YORK	GBP / USD	25,818.43
November 3, 2011	HSBC BANK USA, N.A.	CLP / USD	3,887,620.11
December 27, 2011	HSBC BANK USA, N.A.	USD / GBP	-108,405.50
January 3, 2012	HSBC BANK USA, N.A.	USD / GBP	-3,591,319.32
February 7, 2012	HSBC BANK USA, N.A.	USD / BRL	-2,458,518.35
February 27, 2012	HSBC BANK USA, N.A.	AUD / USD	85,365.90
March 6, 2012	HSBC BANK USA, N.A.	USD / BRL	-3,979,413.05
November 5, 2012	HSBC BANK USA, N.A.	USD / CHF	-167,292.23
November 13, 2012	HSBC BANK USA, N.A.	MXN / USD	969,107.00
May 14, 2013	HSBC BANK USA, N.A.	USD / TWD	-6,459,436.47
July 1, 2013	HSBC BANK USA, N.A.	USD / NZD	-4,465,783.89
August 6, 2013	HSBC BANK USA, N.A.	USD / PLN	-2,975,752.31

Date	JPMORGAN CHASE	Currency Pair	\$US Value
July 31, 2009	CHASE MANHATTAN BANK NEW YORK	USD / NZD	-5,198,474.53
August 3, 2009	CHASE MANHATTAN BANK NEW YORK	JPY / USD	-7,631,814.60
August 10, 2009	CHASE MANHATTAN BANK NEW YORK	JPY / USD	157,649.97
August 31, 2009	CHASE MANHATTAN BANK NEW YORK	USD / JPY	5,209,798.31
September 14, 2009	CHASE MANHATTAN BANK NEW YORK	NZD / USD	-48,275.85
October 5, 2009	CHASE MANHATTAN BANK NEW YORK	NOK / USD	9,586,804.06
October 12, 2009	CHASE MANHATTAN BANK NEW YORK	USD / CAD	-12,681,060.20
October 12, 2009	CHASE MANHATTAN BANK NEW YORK	USD / CAD	13,208,915.53
October 19, 2009	CHASE MANHATTAN BANK NEW YORK	CAD / USD	-5,215,643.06
November 2, 2009	CHASE MANHATTAN BANK NEW YORK	NZD / USD	8,264,333.12
November 30, 2009	CHASE MANHATTAN BANK NEW YORK	USD / NOK	-8,263.04
January 21, 2010	CHASE MANHATTAN BANK NEW YORK	USD / SEK	-194,768.29
February 1, 2010	CHASE MANHATTAN BANK NEW YORK	NOK / USD	-113,164.01
June 1, 2010	CHASE MANHATTAN BANK NEW YORK	USD / EUR	-9,038,511.59
July 30, 2010	CHASE MANHATTAN BANK NEW YORK	EUR / USD	-1,576,560.80
August 2, 2010	CHASE MANHATTAN BANK NEW YORK	CAD / USD	5,850,799.46
August 23, 2010	CHASE MANHATTAN BANK NEW YORK	AUD / USD	6,079,041.42
October 5, 2010	CHASE MANHATTAN BANK NEW YORK	USD / ZAR	-4,700,174.32
October 5, 2010	CHASE MANHATTAN BANK NEW YORK	TRY / USD	5,915,347.79
October 7, 2010	CHASE MANHATTAN BANK NEW YORK	BRL / USD	4,574,528.33
November 29, 2010	CHASE MANHATTAN BANK NEW YORK	USD / CAD	-3,437,143.00
December 7, 2010	CHASE MANHATTAN BANK NEW YORK	USD / BRL	-80,102.91
January 3, 2011	CHASE MANHATTAN BANK NEW YORK	USD / JPY	-21,858.71
February 1, 2011	CHASE MANHATTAN BANK NEW YORK	USD / CLP	-2,007,037.47
February 7, 2011	CHASE MANHATTAN BANK NEW YORK	USD / NZD	-12,932,022.47
March 9, 2011	CHASE MANHATTAN BANK NEW YORK	GBP / USD	152,068.03
March 9, 2011	CHASE MANHATTAN BANK NEW YORK	EUR / USD	122,939.60
August 1, 2011	CHASE MANHATTAN BANK NEW YORK	USD / AUD	-8,941,846.73
December 12, 2011	JPMORGAN CHASE BANK, N.A.	USD / SEK	-6,305,612.66
January 3, 2012	JPMORGAN CHASE BANK, N.A.	USD / JPY	-9,441,083.40
July 3, 2012	JPMORGAN CHASE BANK, N.A.	KRW / USD	8,800,937.35
August 7, 2012	JPMORGAN CHASE BANK, N.A.	USD / GBP	-1,140,723.25
August 7, 2012	JPMORGAN CHASE BANK, N.A.	USD / CAD	-54,257.56
September 10, 2012	JPMORGAN CHASE BANK, N.A.	EUR / USD	83,639.64
October 2, 2012	JPMORGAN CHASE BANK, N.A.	USD / BRL	-1,391,454.92
October 30, 2012	JPMORGAN CHASE BANK, N.A.	USD / AUD	-23,173.14
October 30, 2012	JPMORGAN CHASE BANK, N.A.	PLN / USD	3,210,866.72
November 27, 2012	JPMORGAN CHASE BANK, N.A.	USD / PLN	-3,377,309.54
November 29, 2012	JPMORGAN CHASE BANK, N.A.	USD / EUR	-92,267.26
December 3, 2012	JPMORGAN CHASE BANK, N.A.	NZD / USD	2,721 ,986.46
February 25, 2013	JPMORGAN CHASE BANK, N.A.	USD / AUD	-38,633.10
March 5, 2013	JPMORGAN CHASE BANK, N.A.	KRW / USD	3,215,524.09
April 1, 2013	JPMORGAN CHASE BANK, N.A.	USD / JPY	-6,433,079.25
April 1, 2013	JPMORGAN CHASE BANK, N.A.	USD / JPY	9,253,017.59
April 26, 2013	JPMORGAN CHASE BANK, N.A.	USD / GBP	-88,347.36
May 9, 2013	JPMORGAN CHASE BANK, N.A.	CAD / USD	89,912.42
May 28, 2013	JPMORGAN CHASE BANK, N.A.	USD / ILS	-6,643,773.27
July 2, 2013	JPMORGAN CHASE BANK, N.A.	BRL / USD	71,517.35
July 2, 2013	JPMORGAN CHASE BANK, N.A.	BRL / USD	-72,675.71
July 2, 2013	JPMORGAN CHASE BANK, N.A.	USD / AUD	170,088.98

Date	MORGAN STANLEY	Currency Pair	\$US Value
November 14, 2011	MORGAN STANLEY CAPITAL SERVICES LLC	USD / CHF	-57,564.90
November 21, 2011	MORGAN STANLEY CAPITAL SERVICES LLC	CHF / USD	-6,253,199.58
January 3, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SEK	-2,469.66
February 28, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	ZAR / USD	4,283,888.12
March 6, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	ZAR / USD	-4,520,173.14
March 12, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SEK	-16,599,457.54
March 13, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / ZAR	57,588.16
March 20, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	ZAR / USD	-41,620.31
March 30, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SEK	1,654,769.61
April 16, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	SEK / USD	-3,609,382.40
April 24, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	RUB / USD	-8,880,730.52
May 17, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / RUB	4,116,183.40
May 29, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / RUB	-1,442,122.42
May 29, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SEK	9,713,696.65
June 5, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / RUB	4,207,676.04
June 27, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NZD	1,328,938.11
July 2, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NZD	-1,049,826.29
July 3, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SGD	-4,445,510.51
July 3, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SGD	4,407,622.65
July 30, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	AUD / USD	-1,053,060.68
September 5, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	PLN / USD	-1,734,044.98
October 2, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / PLN	-696,142.11
October 30, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / TWD	-3,242,317.18
October 30, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / TWD	3,238,540.60
November 6, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	TWD / USD	3,251,461.79
November 19, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / AUD	2,627,980.76
December 3, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	AUD / USD	-2,683,656.19
December 10, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / AUD	-22,914,326.75
December 10, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / AUD	6,718,400.00
December 17, 2012	MORGAN STANLEY CAPITAL SERVICES LLC	USD / AUD	15,780.68
January 22, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	NOK / USD	-3,956,782.10
January 28, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NOK	22,803,913.95
February 11, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NOK	13,182,073.06
February 12, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	BRL / USD	3,291,313.67
February 12, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	BRL / USD	-3,271,279.29
February 19, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SEK	-8,869,864.36
February 20, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / BRL	2,582,568.81
February 20, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / SEK	3,575,927.44
February 25, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	SEK / USD	8,869,864.36
February 28, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / BRL	1,023,765.07
March 26, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	BRL / USD	-3,254,670.11
May 28, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	NZD / USD	8,718,904.99
June 10, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / JPY	-8,869,543.39
June 10, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / JPY	8,552,821.91
July 1, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NOK	-91,151.36
July 1, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NOK	88,269.38
August 12, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NOK	45,933.60
August 26, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NOK	5,452,077.47
September 30, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	NOK / USD	201,457.42
October 21, 2013	MORGAN STANLEY CAPITAL SERVICES LLC	USD / NOK	157,496.30

Date	UBS	Currency Pair	\$US Value
July 31, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / CHF	-12,685,390.61
August 3, 2009	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	-8,836,545.19
August 17, 2009	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	2,576,351.19
August 31, 2009	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	-12,793,679.33
September 8, 2009	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	-2,873.37
September 28, 2009	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	6,828.27
September 28, 2009	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	-6,786.69
October 19, 2009	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	-8,029,276.39
January 19, 2010	UNION BANK OF SWIT NEW YK DTC 642	JPY / USD	7,098,722.10
February 1, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / CHF	-12,990.63
March 8, 2010	UNION BANK OF SWIT NEW YK DTC 642	CAD / USD	44,215.18
May 3, 2010	UNION BANK OF SWIT NEW YK DTC 642	CAD / USD	98,964.11
July 6, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / NOK	-213,781.35
September 13, 2010	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	101,028.34
September 21, 2010	UNION BANK OF SWIT NEW YK DTC 642	ILS / USD	3,582,318.13
September 21, 2010	UNION BANK OF SWIT NEW YK DTC 642	ILS / USD	-3,466,346.93
October 12, 2010	UNION BANK OF SWIT NEW YK DTC 642	BRL / USD	2,898,445.73
October 25, 2010	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	36,133.87
November 1, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	22,219.52
November 22, 2010	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	44,165.55
November 23, 2010	UNION BANK OF SWIT NEW YK DTC 642	SGD / USD	2,240,012.14
December 20, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-2,820,921.46
June 6, 2011	UNION BANK OF SWIT NEW YK DTC 642	CAD / USD	118,860.16
October 18, 2011	UNION BANK OF SWIT NEW YK DTC 642	TRY / USD	250,043.74
October 31, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / AUD	-41,236.52
October 31, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / AUD	41,236.65
November 7, 2011	UBS AG STAMFORD BRANCH	AUD / USD	182,182.00
December 27, 2011	UBS AG STAMFORD BRANCH	USD / CAD	9,307,174.95
January 3, 2012	UBS AG STAMFORD BRANCH	CLP / USD	2,567,969.60
January 4, 2012	UBS AG STAMFORD BRANCH	USD / CAD	-1,988,906.89
January 17, 2012	UBS AG STAMFORD BRANCH	USD / CAD	6,396,374.21
March 13, 2012	UBS AG STAMFORD BRANCH	USD / SGD	-4,458,100.56
April 17, 2012	UBS AG STAMFORD BRANCH	USD / TRY	36,115.12
July 16, 2012	UBS AG STAMFORD BRANCH	CHF / USD	-6,752,290.21
August 27, 2012	UBS AG STAMFORD BRANCH	USD / GBP	2,526,004.26
September 5, 2012	UBS AG STAMFORD BRANCH	USD / BRL	-3,124,615.27
October 29, 2012	UBS AG STAMFORD BRANCH	NOK / USD	13,489,878.35
November 19, 2012	UBS AG STAMFORD BRANCH	NOK / USD	4,066,896.74
November 26, 2012	UBS AG STAMFORD BRANCH	USD / NOK	-285,992.39
January 15, 2013	UBS AG STAMFORD BRANCH	TRY / USD	-3,258,591.55
February 25, 2013	UBS AG STAMFORD BRANCH	USD / CHF	31,281.69
February 28, 2013	UBS AG STAMFORD BRANCH	USD / CHF	2,187,064.25
March 4, 2013	UBS AG STAMFORD BRANCH	CHF / USD	4,217,083.73
April 1, 2013	UBS AG STAMFORD BRANCH	CAD / USD	6,610,657.94
May 13, 2013	UBS AG STAMFORD BRANCH	USD / SEK	8,944,845.40
May 28, 2013	UBS AG STAMFORD BRANCH	USD / SEK	-6,783,786.50
May 28, 2013	UBS AG STAMFORD BRANCH	USD / PLN	3,216,554.17
June 11, 2013	UBS AG STAMFORD BRANCH	PLN / USD	153,310.73
July 16, 2013	UBS AG STAMFORD BRANCH	USD / ZAR	-6,047,869.94
July 23, 2013	UBS AG STAMFORD BRANCH	ZAR / USD	-1,579,638.00

Appendix 2

Date	DEUTSCHE BANK	Currency Pair	\$US Value
December 8, 2005	DEUTSCHE BANK LONDON	JPY / USD	29,334,254.97
March 8, 2006	DEUTSCHE BANK LONDON	JPY / USD	223,414.09
March 24, 2006	DEUTSCHE BANK LONDON	EUR / USD	162,095.54
April 10, 2006	DEUTSCHE BANK LONDON	USD / AUD	-242,926.96
May 26, 2006	DEUTSCHE BANK LONDON	USD / CHF	-1,574,544.78
September 21, 2006	DEUTSCHE BANK LONDON	EUR / USD	10,674,621.39
September 26, 2006	DEUTSCHE BANK LONDON	USD / GBP	-221,018.16
October 20, 2006	DEUTSCHE BANK LONDON	NOK / USD	144,027.32
December 2, 2011	DEUTSCHE BANK AG	USD / TRY	-2,136.09
December 5, 2011	DEUTSCHE BANK AG	USD / HKD	-302,245.57
January 9, 2012	DEUTSCHE BANK AG	USD / ILS	-23,935.76
February 8, 2012	DEUTSCHE BANK AG	NOK / USD	102,969.24
February 15, 2012	DEUTSCHE BANK AG	GBP / USD	40,775.71
March 1, 2012	DEUTSCHE BANK AG	JPY / USD	1,883,334.99
March 2, 2012	DEUTSCHE BANK AG	GBP / USD	111,159.19
March 9, 2012	DEUTSCHE BANK AG	USD / PLN	-43,388.93
March 13, 2012	DEUTSCHE BANK AG	USD / SGD	-316,748.67
April 26, 2012	DEUTSCHE BANK AG	USD / DKK	-18,798.47
April 26, 2012	DEUTSCHE BANK AG	DKK / USD	-125,983.04
May 2, 2012	DEUTSCHE BANK AG	USD / NOK	-46,731.22
May 10, 2012	DEUTSCHE BANK AG	HKD / USD	150,611.49
May 23, 2012	DEUTSCHE BANK AG	USD / SGD	-13,451.31
May 24, 2012	DEUTSCHE BANK AG	USD / SGD	-8,962.37
May 31, 2012	DEUTSCHE BANK AG	USD / HKD	-32,999.74
June 4, 2012	DEUTSCHE BANK AG	ZAR / USD	186,995.22
June 8, 2012	DEUTSCHE BANK AG	MXN / USD	7,084.27
June 15, 2012	DEUTSCHE BANK AG	GBP / USD	95,829.37
June 29, 2012	DEUTSCHE BANK AG	SEK / USD	71,659.06
July 2, 2012	DEUTSCHE BANK AG	USD / NOK	-356,877.28
July 31, 2012	DEUTSCHE BANK AG	USD / AUD	-26,337.10
August 3, 2012	DEUTSCHE BANK AG	EUR / USD	308,271.02
August 3, 2012	DEUTSCHE BANK AG	CHF / USD	49,863.76
August 6, 2012	DEUTSCHE BANK AG	EUR / USD	49,030.06
August 6, 2012	DEUTSCHE BANK AG	EUR / USD	162,893.31
August 16, 2012	DEUTSCHE BANK AG	USD / JPY	-56,899.60
August 20, 2012	DEUTSCHE BANK AG	EUR / USD	568,816.70
September 25, 2012	DEUTSCHE BANK AG	SEK / USD	-1,729,454.37
November 6, 2012	DEUTSCHE BANK AG	DKK / USD	116,873.52
November 8, 2012	DEUTSCHE BANK AG	USD / DKK	-337,474.74
February 11, 2013	DEUTSCHE BANK AG	USD / NZD	-71,827.63
February 28, 2013	DEUTSCHE BANK AG	USD / SGD	-97,170.02
March 1, 2013	DEUTSCHE BANK AG	USD / DKK	-1,375,829.59
March 1, 2013	DEUTSCHE BANK AG	EUR / USD	3,066,305.98
July 1, 2013	DEUTSCHE BANK AG	USD / JPY	-1,314,358.31
July 1, 2013	DEUTSCHE BANK AG	USD / NOK	-149,377.90
August 1, 2013	DEUTSCHE BANK AG	HKD / USD	83,555.65
August 16, 2013	DEUTSCHE BANK AG	USD / AUD	-12,396.09
October 2, 2013	DEUTSCHE BANK AG	USD / SEK	-505,166.39
October 4, 2013	DEUTSCHE BANK AG	GBP / USD	3,821,821.71
December 3, 2013	DEUTSCHE BANK AG	CHF / USD	74,165.38

Date	MORGAN STANLEY	Currency Pair	\$US Value
December 6, 2007	MORGAN STANLEY & CO INC	BRL / USD	73,193.97
December 6, 2007	MORGAN STANLEY & CO INC	USD / JPY	-117,276.85
December 7, 2007	MORGAN STANLEY & CO INC	HKD / USD	-33,091.01
December 11, 2007	MORGAN STANLEY & CO INC	AUD / USD	-12,452,495.46
December 11, 2007	MORGAN STANLEY & CO INC	USD / SEK	2,091,533.54
December 13, 2007	MORGAN STANLEY & CO INC	HKD / USD	100,363.55
December 13, 2007	MORGAN STANLEY & CO INC	DKK / USD	-64,675.75
January 8, 2008	MORGAN STANLEY & CO INC	USD / NOK	-10,491.47
February 1, 2008	MORGAN STANLEY & CO INC	AUD / USD	5,972,554.24
February 1, 2008	MORGAN STANLEY & CO INC	JPY / USD	5,619,709.22
February 1, 2008	MORGAN STANLEY & CO INC	USD / SGD	-5,137.57
February 1, 2008	MORGAN STANLEY & CO INC	USD / TRY	-238,824.23
February 1, 2008	MORGAN STANLEY & CO INC	AUD / USD	-6,016,613.79
March 5, 2008	MORGAN STANLEY & CO INC	USD / CHF	-2,207,259.93
March 5, 2008	MORGAN STANLEY & CO INC	GBP / USD	-99,070.99
March 5, 2008	MORGAN STANLEY & CO INC	USD / EUR	1,394,541.80
March 10, 2008	MORGAN STANLEY & CO INC	EUR / USD	8,698,997.32
March 10, 2008	MORGAN STANLEY & CO INC	USD / JPY	-13,407,649.26
March 10, 2008	MORGAN STANLEY & CO INC	NOK / USD	1,876,127.07
March 10, 2008	MORGAN STANLEY & CO INC	CHF / USD	16,811,573.96
March 10, 2008	MORGAN STANLEY & CO INC	AUD / USD	-14,665,042.98
March 10, 2008	MORGAN STANLEY & CO INC	SGD / USD	-20,722.71
March 10, 2008	MORGAN STANLEY & CO INC	USD / GBP	35,741,830.05
March 13, 2008	MORGAN STANLEY & CO INC	BRL / USD	-174,711.53
March 19, 2008	MORGAN STANLEY & CO INC	CHF / USD	-1,642,106.15
March 19, 2008	MORGAN STANLEY & CO INC	SEK / USD	-168,083.24
March 27, 2008	MORGAN STANLEY & CO INC	JPY / USD	193,091.33
April 2, 2008	MORGAN STANLEY & CO INC	NZD / USD	9,586.50
April 2, 2008	MORGAN STANLEY & CO INC	SGD / USD	1,027,518.91
April 2, 2008	MORGAN STANLEY & CO INC	NZD / USD	-9,932.90
April 17, 2008	MORGAN STANLEY & CO INC	NZD / USD	14,282.57
May 6, 2008	MORGAN STANLEY & CO INC	GBP / USD	3,591,511.92
May 6, 2008	MORGAN STANLEY & CO INC	USD / EUR	2,662,383.45
May 21, 2008	MORGAN STANLEY & CO INC	USD / CZK	-101,388.01
May 29, 2008	MORGAN STANLEY & CO INC	USD / DKK	-2,967,363.25
June 5, 2008	MORGAN STANLEY & CO INC	EUR / USD	3,135,632.98
June 5, 2008	MORGAN STANLEY & CO INC	EUR / USD	-3,108,681.15
June 5, 2008	MORGAN STANLEY & CO INC	USD / EUR	1,156,109.36
June 17, 2008	MORGAN STANLEY & CO INC	USD / CHF	-11,373,630.45
June 17, 2008	MORGAN STANLEY & CO INC	HKD / USD	-3,747,385.79
June 23, 2008	MORGAN STANLEY & CO INC	USD / SGD	-257,456.12
June 30, 2008	MORGAN STANLEY & CO INC	SEK / USD	13,104.22
July 9, 2008	MORGAN STANLEY & CO INC	EUR / USD	-144,897.89
July 14, 2008	MORGAN STANLEY & CO INC	CZK / USD	1,704,386.49
August 7, 2008	MORGAN STANLEY & CO INC	EUR / USD	-14,312,596.85
August 13, 2008	MORGAN STANLEY & CO INC	USD / JPY	-36,351.80
August 27, 2008	MORGAN STANLEY & CO INC	USD / EUR	3,068,170.44
September 10, 2008	MORGAN STANLEY & CO INC	USD / SEK	-102,759.22
September 12, 2008	MORGAN STANLEY & CO INC	USD / EUR	-17,411,022.20
September 12, 2008	MORGAN STANLEY & CO INC	USD / SEK	-4,426,652.52

Date	RBS	Currency Pair	\$US Value
April 22, 2009	RBS FIN MKTS TREAS	USD / AUD	-81,443.00
May 7, 2009	RBS FIN MKTS TREAS	USD / CZK	-13,296.11
June 4, 2009	RBS FIN MKTS TREAS	GBP / USD	1,520,851.01
June 12, 2009	RBS FIN MKTS TREAS	USD / GBP	-192,310.80
September 4, 2009	RBS FIN MKTS TREAS	DKK / USD	4,212,703.76
September 4, 2009	RBS FIN MKTS TREAS	EUR / USD	1,154,581.27
October 1, 2009	RBS FIN MKTS TREAS	USD / NZD	-37,307.40
November 4, 2009	RBS FIN MKTS TREAS	USD / JPY	-67,354.63
November 18, 2009	RBS FIN MKTS TREAS	GBP / USD	59,077.42
February 1, 2011	RBS FIN MKTS TREAS	AUD / USD	18,030.47
August 1, 2011	RBS FIN MKTS TREAS	USD / GBP	-103,656.06
November 1, 2011	RBS FIN MKTS TREAS	USD / DKK	-282,759.84
November 1, 2011	RBS FIN MKTS TREAS	EUR / USD	1,879,377.96
February 8, 2012	RBS FIN MKTS TREAS	NOK / USD	235,974.51
April 2, 2012	RBS FIN MKTS TREAS	USD / GBP	-1,210,465.67
April 4, 2012	RBS FIN MKTS TREAS	CHF / USD	1,183,585.61
May 2, 2012	RBS FIN MKTS TREAS	USD / HKD	-1,387.09
May 31, 2012	RBS FIN MKTS TREAS	SEK / USD	80,031.43
June 4, 2012	RBS FIN MKTS TREAS	ILS / USD	1,617,099.42
June 4, 2012	RBS FIN MKTS TREAS	GBP / USD	641.17
June 12, 2012	RBS PLC	USD / DKK	-3,562,035.99
June 12, 2012	RBS PLC	USD / SGD	-525,784.83
June 22, 2012	RBS FIN MKTS TREAS	NZD / USD	59,018.86
July 17, 2012	RBS FIN MKTS TREAS	USD / DKK	-74,992.96
July 19, 2012	RBS FIN MKTS TREAS	USD / SGD	-63,363.90
July 26, 2012	RBS FIN MKTS TREAS	USD / NOK	85,281.97
August 1, 2012	RBS FIN MKTS TREAS	EUR / USD	1,289,123.72
August 15, 2012	RBS FIN MKTS TREAS	GBP / USD	9,819.95
September 4, 2012	RBS FIN MKTS TREAS	JPY / USD	15,978,810.90
April 1, 2010	RBS FIN MKTS TREAS	GBP / USD	213,253.04
April 2, 2012	RBS FIN MKTS TREAS	USD / NOK	-2,113,770.60
August 6, 2010	RBS FIN MKTS TREAS	USD / HKD	-208,194.66
December 10, 2010	RBS FIN MKTS TREAS	USD / NZD	-1,061,747.36
December 8, 2009	RBS FIN MKTS TREAS	USD / DKK	-4,085,600.44
February 1, 2010	RBS FIN MKTS TREAS	EUR / USD	125,614.79
February 2, 2011	RBS FIN MKTS TREAS	USD / CHF	-1,609,243.92
February 24, 2011	RBS FIN MKTS TREAS	PLN / USD	59,720.93
February 29, 2012	RBS FIN MKTS TREAS	USD / TRY	-8,023.56
February 3, 2011	RBS FIN MKTS TREAS	USD / SEK	-40,152.35
February 7, 2011	RBS FIN MKTS TREAS	ILS / USD	170,911.26
January 13, 2012	RBS FIN MKTS TREAS	CHF / USD	112,995.69
July 6, 2011	RBS FIN MKTS TREAS	JPY / USD	3,375,435.83
March 17, 2010	RBS FIN MKTS TREAS	HUF / USD	2,930,737.31
March 30, 2011	RBS FIN MKTS TREAS	SGD / USD	102,867.89
March 30, 2012	RBS FIN MKTS TREAS	EUR / USD	-1,356,593.63
March 9, 2012	RBS FIN MKTS TREAS	USD / EUR	-1,796,363.58
May 11, 2010	RBS FIN MKTS TREAS	USD / SEK	-1,147,417.99
May 31, 2012	RBS FIN MKTS TREAS	MXN / USD	14,217.85
September 2, 2010	RBS FIN MKTS TREAS	AUD / USD	10,698,119.62
September 4, 2012	RBS FIN MKTS TREAS	AUD / USD	11,890,468.05

Date	UBS	Currency Pair	\$US Value
December 6, 2007	UNION BANK OF SWIT NEW YK DTC 642	HKD / USD	8,451,820.58
December 6, 2007	UNION BANK OF SWIT NEW YK DTC 642	SGD / USD	1,051,507.37
February 12, 2008	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	56,265.22
March 4, 2008	UNION BANK OF SWIT NEW YK DTC 642	USD / SEK	-130,224.58
May 30, 2008	UNION BANK OF SWIT NEW YK DTC 642	NZD / USD	218,413.07
June 3, 2008	UNION BANK OF SWIT NEW YK DTC 642	USD / NOK	-292,972.06
June 4, 2008	UNION BANK OF SWIT NEW YK DTC 642	JPY / USD	134,395.44
July 24, 2008	UNION BANK OF SWIT NEW YK DTC 642	ILS / USD	76,257.51
September 3, 2008	UNION BANK OF SWIT NEW YK DTC 642	USD / HKD	-44,224.64
February 6, 2009	UNION BANK OF SWIT NEW YK DTC 642	DKK / USD	81,748.22
March 4, 2009	UNION BANK OF SWIT NEW YK DTC 642	GBP / USD	7,204.47
March 4, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / SGD	-42,004.31
March 16, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / DKK	-47,101.95
April 1, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-140,132.00
July 1, 2009	UNION BANK OF SWIT NEW YK DTC 642	JPY / USD	14,526.77
October 1, 2009	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	6,012.53
November 6, 2009	UNION BANK OF SWIT NEW YK DTC 642	HKD / USD	110,325.02
November 9, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	-49,302.96
December 9, 2009	UNION BANK OF SWIT NEW YK DTC 642	AUD / USD	23,176.82
February 17, 2010	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	10,748,310.57
March 2, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-9,170.55
March 9, 2010	UNION BANK OF SWIT NEW YK DTC 642	JPY / USD	1,023,742.07
March 15, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / HKD	-62,064.56
June 7, 2010	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	50,629.64
July 16, 2010	UNION BANK OF SWIT NEW YK DTC 642	NOK / USD	61,272.59
July 27, 2010	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	291,453.72
August 2, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / SEK	-145,139.98
January 13, 2011	UNION BANK OF SWIT NEW YK DTC 642	GBP / USD	1,115,886.04
February 28, 2011	UNION BANK OF SWIT NEW YK DTC 642	PLN / USD	37,074.57
March 9, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	-8,925,283.91
July 8, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / NOK	-11,570.49
August 1, 2011	UNION BANK OF SWIT NEW YK DTC 642	DKK / USD	192,516.94
August 1, 2011	UNION BANK OF SWIT NEW YK DTC 642	HKD / USD	7,857.78
October 26, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / ILS	-17,728.87
November 1, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / AUD	-99,839.03
November 1, 2011	UNION BANK OF SWIT NEW YK DTC 642	JPY / USD	157,326.50
December 1, 2011	UBS AG STAMFORD BRANCH	HKD / USD	6,107,910.42
December 20, 2011	UBS AG STAMFORD BRANCH	USD / JPY	-204,118.20
January 24, 2012	UBS AG STAMFORD BRANCH	USD / ILS	-74,474.58
February 8, 2012	UBS AG STAMFORD BRANCH	HKD / USD	2,487,753.01
March 7, 2012	UBS AG STAMFORD BRANCH	USD / DKK	-5,516.40
March 7, 2012	UBS AG STAMFORD BRANCH	USD / ZAR	-294,349.01
March 16, 2012	UBS AG STAMFORD BRANCH	USD / PLN	-65,284.28
March 22, 2012	UBS AG STAMFORD BRANCH	JPY / USD	-3,099,015.75
April 16, 2012	UBS AG STAMFORD BRANCH	USD / GBP	-135,837.51
May 8, 2012	UBS AG STAMFORD BRANCH	USD / GBP	-163,673.18
May 9, 2012	UBS AG STAMFORD BRANCH	USD / EUR	-241,880.93
June 6, 2012	UBS AG STAMFORD BRANCH	USD / JPY	-1,782,928.17
June 15, 2012	UBS AG STAMFORD BRANCH	MXN / USD	8,204.52
July 30, 2012	UBS AG STAMFORD BRANCH	USD / ZAR	-8,037.17
August 1, 2012	UBS AG STAMFORD BRANCH	EUR / USD	160,756.35
September 4, 2012	UBS AG STAMFORD BRANCH	AUD / USD	3,914,768.16
September 4, 2012	UBS AG STAMFORD BRANCH	DKK / USD	3,658,081.46
September 4, 2012	UBS AG STAMFORD BRANCH	USD / EUR	-8,342,213.90
September 14, 2012	UBS AG STAMFORD BRANCH	USD / EUR	-3,784,398.38
November 2, 2012	UBS AG STAMFORD BRANCH	DKK / USD	37,397.45

Appendix 3

Date	BANK OF AMERICA	Currency Pair	\$US Value
May 17, 2011	BANK OF AMERICA	USD / AUD	-1,913,507.05
May 17, 2011	BANK OF AMERICA	USD / GBP	-8,191,831.32
May 17, 2011	BANK OF AMERICA	USD / CAD	-2,192,476.91
May 17, 2011	BANK OF AMERICA	USD / EUR	-4,595,129.97
May 17, 2011	BANK OF AMERICA	USD / HKD	-2,300,562.18
May 17, 2011	BANK OF AMERICA	USD / JPY	-9,574,131.91
May 17, 2011	BANK OF AMERICA	USD / SGD	-1,309,184.61
May 17, 2011	BANK OF AMERICA	USD / SEK	-1,508,708.38
May 17, 2011	BANK OF AMERICA	USD / CHF	-3,424,686.79
May 17, 2011	BANK OF AMERICA	USD / AUD	1,900,000.00
May 17, 2011	BANK OF AMERICA	USD / EUR	4,600,000.00
May 17, 2011	BANK OF AMERICA	USD / HKD	2,300,000.00
May 17, 2011	BANK OF AMERICA	USD / SEK	1,500,000.00
May 17, 2011	BANK OF AMERICA	USD / SGD	1,300,000.00
May 17, 2011	BANK OF AMERICA	USD / DKK	-673,063.12
May 17, 2011	BANK OF AMERICA	USD / EUR	-2,514,822.74
May 17, 2011	BANK OF AMERICA	USD / NOK	-980,412.62
May 17, 2011	BANK OF AMERICA	USD / CAD	2,200,000.00
May 17, 2011	BANK OF AMERICA	USD / CHF	3,400,000.00
May 17, 2011	BANK OF AMERICA	USD / DKK	680,000.00
May 17, 2011	BANK OF AMERICA	USD / EUR	2,500,000.00
May 17, 2011	BANK OF AMERICA	USD / GBP	8,200,000.00
May 17, 2011	BANK OF AMERICA	USD / JPY	9,600,000.00
May 17, 2011	BANK OF AMERICA	USD / NOK	970,000.00

Date	RBS	Currency Pair	\$US Value
February 9, 2009	RBS FIN MKTS TREAS	AUD / USD	44,401.01
February 19, 2009	RBS FIN MKTS TREAS	USD / ILS	-120,188.16
April 17, 2009	RBS FIN MKTS TREAS	USD / CZK	-21,536.87
June 4, 2009	RBS FIN MKTS TREAS	USD / NOK	-202,722.54
September 4, 2009	RBS FIN MKTS TREAS	EUR / USD	129,627.09
September 14, 2009	RBS FIN MKTS TREAS	USD / EUR	-1,909,374.90
September 29, 2009	RBS FIN MKTS TREAS	USD / NZD	-26,929.37
September 30, 2009	RBS FIN MKTS TREAS	USD / JPY	-121,699.66
October 1, 2009	RBS FIN MKTS TREAS	USD / GBP	-50,860.80
October 2, 2009	RBS FIN MKTS TREAS	HKD / USD	38,973.53
February 1, 2010	RBS FIN MKTS TREAS	HKD / USD	15,710.99
April 1, 2010	RBS FIN MKTS TREAS	GBP / USD	20,578.59
June 2, 2010	RBS FIN MKTS TREAS	EUR / USD	247,597.74
September 2, 2010	RBS FIN MKTS TREAS	AUD / USD	1,872,693.37
September 2, 2010	RBS FIN MKTS TREAS	DKK / USD	496,129.97
September 2, 2010	RBS FIN MKTS TREAS	JPY / USD	2,594,080.92
November 1, 2010	RBS FIN MKTS TREAS	USD / NZD	-6,307.13
November 1, 2010	RBS FIN MKTS TREAS	USD / NOK	-78,663.61
November 2, 2010	RBS FIN MKTS TREAS	USD / SGD	-10,965.82
December 8, 2010	RBS FIN MKTS TREAS	ILS / USD	329,802.18
February 1, 2011	RBS FIN MKTS TREAS	JPY / USD	34,253.03
February 1, 2011	RBS FIN MKTS TREAS	USD / SGD	-8,045.75
February 3, 2011	RBS FIN MKTS TREAS	EUR / USD	75,195.64
April 14, 2011	RBS FIN MKTS TREAS	USD / DKK	-17,740.79
May 2, 2011	RBS FIN MKTS TREAS	USD / NZD	-13,121.76
May 3, 2011	RBS FIN MKTS TREAS	USD / AUD	-20,621.77
May 6, 2011	RBS FIN MKTS TREAS	USD / HKD	-4,691.72
August 1, 2011	RBS FIN MKTS TREAS	USD / GBP	-30,026.34
August 1, 2011	RBS FIN MKTS TREAS	USD / ILS	-5,244.46
August 1, 2011	RBS FIN MKTS TREAS	USD / NOK	-34,477.91
August 1, 2011	RBS FIN MKTS TREAS	USD / NOK	35,803.49
November 1, 2011	RBS FIN MKTS TREAS	CHF / USD	21,057.60
January 13, 2012	RBS FIN MKTS TREAS	NOK / USD	7,780.80
January 20, 2012	RBS FIN MKTS TREAS	USD / SEK	-3,302.75
May 31, 2012	RBS FIN MKTS TREAS	USD / GBP	18,447.85
June 4, 2012	RBS FIN MKTS TREAS	ILS / USD	195,773.07
June 12, 2012	RBS FIN MKTS TREAS	GBP / USD	2,244,569.45
July 2, 2012	RBS FIN MKTS TREAS	USD / ILS	53,401.84
August 1, 2012	RBS FIN MKTS TREAS	EUR / USD	253,235.95
August 1, 2012	RBS FIN MKTS TREAS	NZD / USD	75,768.75
September 4, 2012	RBS FIN MKTS TREAS	AUD / USD	2,081,412.58
September 4, 2012	RBS FIN MKTS TREAS	JPY / USD	2,740,433.15
September 4, 2012	RBS FIN MKTS TREAS	USD / NOK	-1,045,950.02
September 4, 2012	RBS FIN MKTS TREAS	SGD / USD	86,557.83
September 4, 2012	RBS FIN MKTS TREAS	USD / CHF	-1,938,530.89
September 4, 2012	RBS FIN MKTS TREAS	HKD / USD	5,700.26
September 4, 2012	RBS FIN MKTS TREAS	SGD / USD	-85,003.61
September 13, 2012	RBS FIN MKTS TREAS	DKK / USD	91,578.07
December 3, 2012	RBS FIN MKTS TREAS	GBP / USD	49,928.99
December 12, 2012	RBS FIN MKTS TREAS	AUD / USD	12,918.24

Date	UBS	Currency Pair	\$US Value
March 19, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / CZK	-1,071.62
March 31, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-6,300.79
April 1, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-24,644.70
April 1, 2009	UNION BANK OF SWIT NEW YK DTC 642	JPY / USD	48,013.90
April 7, 2009	UNION BANK OF SWIT NEW YK DTC 642	DKK / USD	109,239.27
April 17, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / HKD	-104,177.10
July 31, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / AUD	-5,026.57
September 18, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / CAD	-85,067.11
December 1, 2009	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	-58,794.45
January 14, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / SGD	-1,309,343.70
March 1, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-8,955.90
March 29, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	-5,125.18
April 1, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / HKD	-4,050.28
June 8, 2010	UNION BANK OF SWIT NEW YK DTC 642	AUD / USD	19,949.58
July 1, 2010	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	7,348.94
November 1, 2010	UNION BANK OF SWIT NEW YK DTC 642	USD / DKK	-111,885.36
January 7, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / SGD	5,406.39
January 12, 2011	UNION BANK OF SWIT NEW YK DTC 642	AUD / USD	4,357.04
February 1, 2011	UNION BANK OF SWIT NEW YK DTC 642	ILS / USD	5,193.21
February 3, 2011	UNION BANK OF SWIT NEW YK DTC 642	EUR / USD	27,439.04
February 23, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	-282,182.80
March 9, 2011	UNION BANK OF SWIT NEW YK DTC 642	DKK / USD	1,136,329.89
March 9, 2011	UNION BANK OF SWIT NEW YK DTC 642	SEK / USD	1,205,367.74
April 12, 2011	UNION BANK OF SWIT NEW YK DTC 642	HKD / USD	51,880.14
May 4, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / AUD	-20,433.42
June 10, 2011	UNION BANK OF SWIT NEW YK DTC 642	NZD / USD	133,134.86
July 8, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-26,334.41
August 24, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / DKK	-42,730.05
October 27, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	-1,877,574.48
October 27, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / HKD	-241,768.68
October 27, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / TRY	-110,183.08
November 7, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / GBP	-1,354,313.37
November 7, 2011	UNION BANK OF SWIT NEW YK DTC 642	USD / EUR	-1,520,718.82
November 7, 2011	UNION BANK OF SWIT NEW YK DTC 642	CHF / USD	1,851,291.89
January 3, 2012	UBS AG STAMFORD BRANCH	USD / EUR	12,627.91
January 31, 2012	UBS AG STAMFORD BRANCH	USD / HKD	-28,750.69
March 5, 2012	UBS AG STAMFORD BRANCH	USD / EUR	3,894.24
March 6, 2012	UBS AG STAMFORD BRANCH	USD / AUD	-108,927.44
March 7, 2012	UBS AG STAMFORD BRANCH	USD / ZAR	-36,943.86
March 7, 2012	UBS AG STAMFORD BRANCH	USD / ZAR	36,604.89
March 16, 2012	UBS AG STAMFORD BRANCH	USD / EUR	3,693.73
April 11, 2012	UBS AG STAMFORD BRANCH	USD / ILS	-5,293.87
June 6, 2012	UBS AG STAMFORD BRANCH	USD / JPY	-130,315.17
June 19, 2012	UBS AG STAMFORD BRANCH	USD / NOK	-16,791.86
September 4, 2012	UBS AG STAMFORD BRANCH	GBP / USD	1,417,540.43
September 4, 2012	UBS AG STAMFORD BRANCH	USD / EUR	-1,456,300.57
September 4, 2012	UBS AG STAMFORD BRANCH	SEK / USD	1,177,751.70
September 4, 2012	UBS AG STAMFORD BRANCH	CHF / USD	1,808,920.24
September 4, 2012	UBS AG STAMFORD BRANCH	USD / JPY	155,604.22
September 14, 2012	UBS AG STAMFORD BRANCH	DKK / USD	78,675.13

Appendix 4

<u>ADR</u>	<u>Plan Name</u>	<u>Plan Year End Date</u>	<u>Shares</u>
Astrazeneca PLC	Bridgestone Master Trust	10/31/2010	7,100
Diageo PLC	Bridgestone Master Trust	10/31/2010	49,300
ENSCO PLC	Bridgestone Master Trust	10/31/2010	7,200
Advanced Semiconductor Engr	Bridgestone Master Trust	10/31/2011	3,344
Astrazeneca PLC	Bridgestone Master Trust	10/31/2011	14,700
Diageo PLC	Bridgestone Master Trust	10/31/2011	49,300
Astrazeneca PLC	Bridgestone Master Trust	10/31/2012	67,285
BHP Billiton Ltd	Bridgestone Master Trust	10/31/2012	27,200
Diageo PLC	Bridgestone Master Trust	10/31/2012	52,390
Taiwan Semiconductor MFG Co LTD	Bridgestone Master Trust	10/31/2012	149,900
Diageo PLC	Bridgestone Master Trust	10/31/2013	44,550
Enersis SA	Bridgestone Master Trust	10/31/2013	55,900
Kering S A	Bridgestone Master Trust	10/31/2013	180,730
ORIX Corp	Bridgestone Master Trust	10/31/2013	4,258
Taiwan Semiconductor MFG Co LTD	Bridgestone Master Trust	10/31/2013	127,400
Nokia Corporation	Caterpillar Retirement Master Trust	11/30/2010	344,925
Shire PLC	Caterpillar Retirement Master Trust	11/30/2010	39,310
Nokia Corporation	Caterpillar Retirement Master Trust	11/30/2011	304,263
Shire PLC	Caterpillar Retirement Master Trust	11/30/2011	58,503
Nokia Corporation	Caterpillar Retirement Master Trust	11/30/2012	215,319
Shire PLC	Caterpillar Retirement Master Trust	11/30/2012	48,740
Nokia Corporation	Caterpillar Retirement Master Trust	12/31/2012	264,928
Shire PLC	Caterpillar Retirement Master Trust	12/31/2012	48,740
ABB Ltd	Caterpillar Insurance Master Trust	12/31/2009	22,635
Imperial Tobacco Group PLC	Caterpillar Insurance Master Trust	12/31/2009	18,300
Koninklijke Philips Electronics	Caterpillar Insurance Master Trust	12/31/2009	17,100
ABB Ltd	Caterpillar Insurance Master Trust	12/31/2010	1,225
Imperial Tobacco Group PLC	Caterpillar Insurance Master Trust	12/31/2010	15,800
Koninklijke Philips Electronics	Caterpillar Insurance Master Trust	12/31/2010	6,800
Imperial Tobacco Group PLC	Caterpillar Insurance Master Trust	12/31/2011	7,500
Imperial Tobacco Group PLC	Caterpillar Insurance Master Trust	12/31/2012	5,700

DEUTSCHE BANK

<u>ADR</u>	<u>Plan Name</u>	<u>Plan Year</u>	<u>Shares</u>
		<u>End Date</u>	
Unilever NV	Bridgestone Master Trust	10/31/2010	99,000
Unilever NV	Bridgestone Master Trust	10/31/2011	99,000
Unilever NV	Bridgestone Master Trust	10/31/2012	134,000
Daiichi Sankyo Co LTD	Bridgestone Master Trust	10/31/2013	26,235
Swiss Re LTD	Bridgestone Master Trust	10/31/2013	6,159
Unilever NV	Bridgestone Master Trust	10/31/2013	157,000
SK Telecom Ltd	Caterpillar Retirement Master Trust	11/30/2010	286,257
Ericsson	Caterpillar Retirement Master Trust	11/30/2011	2,953,536
SK Telecom Ltd	Caterpillar Retirement Master Trust	11/30/2011	344,957
Ericsson	Caterpillar Retirement Master Trust	11/30/2012	335,000
SK Telecom Ltd	Caterpillar Retirement Master Trust	11/30/2012	33,447
Ericsson	Caterpillar Retirement Master Trust	12/31/2012	375,938
SK Telecom Ltd	Caterpillar Retirement Master Trust	12/31/2012	245,055
Ericsson	Caterpillar Insurance Master Trust	12/31/2009	82,700
Icici Bank Ltd	Caterpillar Insurance Master Trust	12/31/2009	15,300
SAP AG	Caterpillar Insurance Master Trust	12/31/2009	11,100
Ericsson	Caterpillar Insurance Master Trust	12/31/2010	70,000
Icici Bank Ltd	Caterpillar Insurance Master Trust	12/31/2010	15,600
Infosys Technologies Ltd	Caterpillar Insurance Master Trust	12/31/2010	9,400
SAP AG	Caterpillar Insurance Master Trust	12/31/2010	9,300
Tenaris SA	Caterpillar Insurance Master Trust	12/31/2010	19,044
Ericsson	Caterpillar Insurance Master Trust	12/31/2011	34,740
Infosys Technologies Ltd	Caterpillar Insurance Master Trust	12/31/2011	8,200
SAP AG	Caterpillar Insurance Master Trust	12/31/2011	11,103
Tenaris SA	Caterpillar Insurance Master Trust	12/31/2011	17,800
Ericsson	Caterpillar Insurance Master Trust	12/31/2012	26,000
Grifols SA	Caterpillar Insurance Master Trust	12/31/2012	3,775
SAP AG	Caterpillar Insurance Master Trust	12/31/2012	11,973
Tenaris SA	Caterpillar Insurance Master Trust	12/31/2012	18,514
Ericsson	Caterpillar Retirement Master Trust	11/30/2010	632,300

JP MORGAN

<u>ADR</u>	<u>Plan Name</u>	<u>Plan Year End Date</u>	<u>Shares</u>
Alcatel-Lucent	Bridgestone Master Trust	10/31/2010	162,082
BP PLC	Bridgestone Master Trust	10/31/2010	37,150
Novo-Nordisk AG	Bridgestone Master Trust	10/31/2010	16,300
Sanofi	Bridgestone Master Trust	10/31/2010	18,846
Total SA	Bridgestone Master Trust	10/31/2010	48,857
Volkswagen AG	Bridgestone Master Trust	10/31/2010	20,985
BP PLC	Bridgestone Master Trust	10/31/2011	64,492
Novo-Nordisk A S	Bridgestone Master Trust	10/31/2011	15,200
Sanofi	Bridgestone Master Trust	10/31/2011	35,924
Teva Pharmaceutical Inds	Bridgestone Master Trust	10/31/2011	120,000
Total SA	Bridgestone Master Trust	10/31/2011	51,226
BP PLC	Bridgestone Master Trust	10/31/2012	64,965
Novo-Nordisk AS	Bridgestone Master Trust	10/31/2012	2,170
Teva Pharmaceuticals SA	Bridgestone Master Trust	10/31/2012	145,000
Total SA	Bridgestone Master Trust	10/31/2012	60,096
BP PLC	Bridgestone Master Trust	10/31/2013	76,488
Nidec Corp	Bridgestone Master Trust	10/31/2013	19,900
Teva Pharmaceuticals INDS	Bridgestone Master Trust	10/31/2013	115,000
BP PLC	Caterpillar Retirement Master Trust	11/30/2010	113,700
Novartis AG	Caterpillar Retirement Master Trust	11/30/2010	340,800
BP PLC	Caterpillar Retirement Master Trust	11/30/2011	144,100
Novartis AG	Caterpillar Retirement Master Trust	11/30/2011	344,400
BP PLC	Caterpillar Retirement Master Trust	11/30/2012	114,000
Novartis AG	Caterpillar Retirement Master Trust	11/30/2012	248,751
BP PLC	Caterpillar Retirement Master Trust	12/31/2012	114,000
Novartis AG	Caterpillar Retirement Master Trust	12/31/2012	467,950
ASML Holdings NV	Caterpillar Insurance Master Trust	12/31/2009	31,788
ASML Holdings NV	Caterpillar Insurance Master Trust	12/31/2010	9,088
ASML Holdings NV	Caterpillar Insurance Master Trust	12/31/2011	14,741
ASML Holdings NV	Caterpillar Insurance Master Trust	12/31/2012	154
Novo-Nordisk AS	Caterpillar Insurance Master Trust	12/31/2012	4,712